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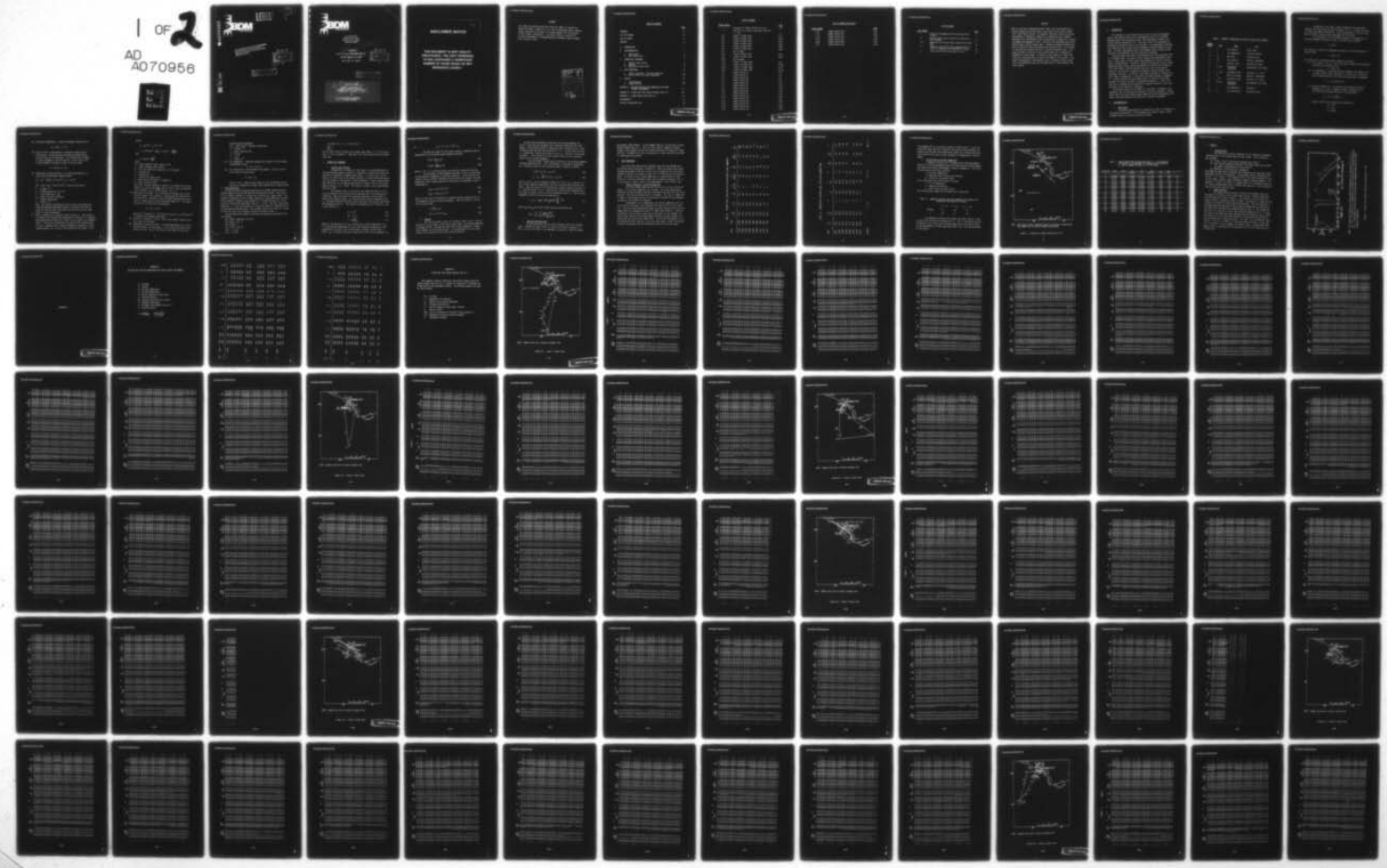

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by

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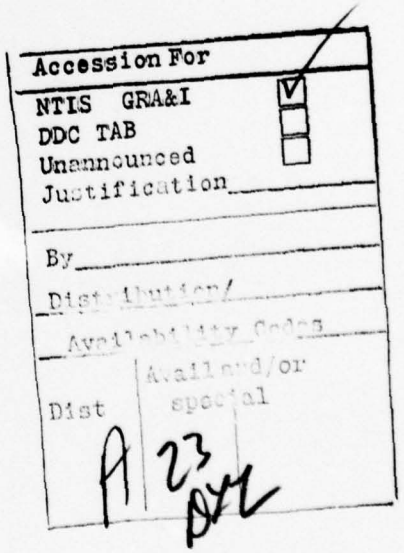
FOREWORD

This report was prepared under Work Order No. 086412 of Contract No. N00014-78-C-0204 in support of a U.S. Naval Postgraduate School research project sponsored by the Naval Air Systems Command, AIR 370 and Naval Avionics Center, Indianapolis. The report contains an analysis of aircraft measurements of micrometeorological parameters made at Panama City, Florida in 1978.



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ABSTRACT

BDM, for the Naval Postgraduate School (NPS), with the cooperation of Airborne Research Associates (ARA), specifically the excellent support of Dr. Ralph Markson and Mr. Jan Sedlacek, obtained a series of aircraft measurements of atmospheric properties in conjunction with a NAVAIR-sponsored joint environmental field investigation at Panama City, Florida in November and December of 1978. The joint field experiment was coordinated by Naval Avionics Center (NAC). Funding for ARA participation and partial funding for NPS participation was provided by NAC. This program is concerned with aerosols and fog in the marine boundary layer. This report provides an analysis of the aircraft data and is intended as a guidebook for other groups. Calibration, data reduction, flight techniques and intercomparisons of certain instruments are discussed. Very careful measurements of the boundary layer, including the near surface layer, are emphasized along with the application of Monin-Obukhov similarity theory.

A. INTRODUCTION

This document is a preliminary analysis and listing of micrometeorological data obtained from aircraft measurements during the 2nd NAVAIR-sponsored Marine Fog and Boundary Layer field experiment at Panama City, Florida (hereby designated PC II). This was a joint field experiment coordinated by the Naval Avionics Facility (NAC). The measurements were made from a Bellanca Turbo Viking aircraft operated by Airborne Research Associates. The Naval Postgraduate School Environmental Physics Group provided additional instrumentation and data acquisition equipment.

Thirteen flights were made on ten different days from 26 November 1978 to 13 December 1978. The typical flight duration was approximately three hours. Three types of flight pattern were employed for specific environmental characterization: low-level, constant altitude runs for sea surface temperature maps, spiral ascents and descents for surface-to-altitude profiles, and "ladder" profiles obtained from level runs of two minutes duration at successively increasing altitudes for marine boundary layer turbulence structure. A printout of the primary variables of interest for each flight is presented as a time series (32 second average) in Appendix B. A Similar printout for each ladder profile (a series of two minute averages at constant altitude) is also presented in Appendix C. Since a full data scan is recorded on the cassette at 3.2 second intervals, finer time resolution can be obtained if necessary.

The primary purpose of this report is to provide a catalogue of the atmospheric data to the other participants as quickly as possible. Considerable effort has been directed toward comparing aircraft measurements with Stage I data and examining the reliability of various instruments.

B. INSTRUMENTATION

1. Description

The primary measurements are summarized in Table I, followed by a more detailed description. The instruments are listed in order of their assigned channels on the data acquisition system.

TABLE I. AIRCRAFT INSTRUMENTATION AND DATA ACQUISITION CHANNELS

CHANNEL NUMBER	DATA	NAME	TYPE
1	P	Air pressure	Solid state
2	T	Air temperature	Platinum resistor
3	Td	Dew point	Aluminum oxide
4	Ts	Sea surface T	Infrared radiometer
5	E	Electric field	Radioactive probes
6	C_T, AC	Temperature structure	Microthermal, AC bridge
7	ε, low	Dissipation rate	Hot-wire, f_ℓ = 10 Hz
8	$\overline{V}$	Hot-wire voltage	Constant T anemometer
9	ε, hi	Dissipation rate	Hot-wire, f_ℓ = 50 Hz
10	C_T, DC	Temperature structure	Microthermal, DC bridge
11	T	Air temperature	Thermistor
12	N	Air refractivity	Microwave cavity

In addition to this data, certain information was occasionally logged by hand from other aircraft instruments such as: altitude, position, air speed, and weather observations. Direct measurements of dew point were made by holding a wet-dry bulb psychrometer out the window.

The calibration of the instruments appears as a mathematical relationship between the physical value, X, and the actual voltage, V

$$X = F(V)$$

For instance, in the case of atmospheric pressure, 10 volts corresponds to 1000 mb, hence

$$P = 100\ V,\ mb$$

The following is a channel-by-channel rundown of the data:

(1) Air pressure: This is a solid state device (National Semiconductor) provided and calibrated by NAC.

$$P = 100\ V,\ mb$$

(2) Air temperature: A platinum resistor (Rosemount Instruments) with a nominal 50Ω resistance, designed for aircraft use. The device was calibrated against a high precision mercury-glass thermometer.

$$T = (V - 0.07)/0.0187,\ °C$$

(3) Dew point temperature: An aluminum oxide conductivity device (Panametrics), it has a somewhat variable calibration curve. This device malfunctioned for most of the experiments.

$$T_d = B^{-1} \log \left(\frac{V-V_o}{A}\right),\ °C$$

Typical values for the calibration parameters are

$$V_o = 0.03$$

$$A = 0.22$$

$$B = 0.024$$

(4) Sea surface temperature: Infrared radiometer (Barnes PRT-5).

$$Ts = 10(V - 1),\ °C$$

(5) Electric field: Ralph Markson's radioactive probe electric field device. This device was not properly balanced during the first part of the experiment. The situation was corrected at 1020 on December 11 during flight #9. Prior to this, the E values tended to be about a factor of two too large.

$$E = 795\ V/1.21,\ V/m$$

(6) Temperature structure function: AC bridge measurement of C_T using paired microthermal tungsten probes.

$$C_T^2 = (V^2 - G^2V_N^2)/\ [\alpha\ G\ B\ d^{1/3}\ R_o\ (1 + \beta T)]^2$$

V_N^2 = noise level, $(0.001\ volts)^2$ + velocity contribution

α = $0.0026,\ °C^{-1}$

B = bridge sensitivity, 14.7 V/Ω

d = probe separation, .85m

R_o = probe ice point resistance

T = ambient temperature

β = $0.004,\ °C^{-1}$

Note: the velocity contribution to V_N^2 is due to the sensitivity of the microthermal temperature sensors to velocity fluctuations. Given the large current to the sensor (10 ma) this can be a large effect in some circumstances.

(7) Rate of dissipation of turbulent kinetic energy (ε): This quantity is obtained from analyzing the fluctuations in velocity in a frequency band determined by filters set at lower (f_ℓ) and upper (f_u) frequency limits. The velocity fluctuations are sensed by hot tungsten wires (4.5 μ dia.) operated with a constant temperature anemometer bridge (Thermo Systems, Inc.) set for a 50% overheat on the ground. If we

define

$$X = (f_\ell^{-2/3} - f_u^{-2/3})^{-3/2}$$

$$Y = B\,(P/1013)^{1/2}\;(288/(T + 273))^{1/4}\;\left(\frac{165-T}{150}\right)$$

then

$$\varepsilon = 619\,U^{3/2}\,X\,\left(\frac{V\overline{V}}{YG}\right)^3$$

where

f_ℓ = lower frequency limit, usually 10 Hz

f_u - upper frequency limit, 500 Hz

B = hot wire sensitivity, typically 1.0 $V^2/(m/sec)^{1/2}$

P = pressure, mb

T = temperature, °C

U = relative air speed, m/sec

$\overline{V}$ = mean hot-wire DC level, V (channel 8)

G = gain, typically 1000

Note that the data recorded on channel 9 is essentially the same except f_ℓ is set at the higher value of 50 Hz. Thus, the designation of channel 7 as ε, lo and channel 9 as ε, hi.

(8) Mean hot-wire voltage: This is the mean DC voltage level of the hot-wire system. This quantity is used because the sensitivity of the hot-wire is a function of the air speed, temperature and pressure in a manner that is partly indicated simply in $\overline{V}$. The characteristics of the hot-wire are expressed by

$$V^2 = V_o^2 + B\sqrt{U}$$

where V_o^2 is typically 2.7 $volt^2$ and B is typically 1.0 $V^2/(m/sec)^{+1/2}$ at standard one atmosphere conditions.

(9) Similar to 7 except f_ℓ = 50 Hz. This is the channel actually used for ε given in the tables.

(10) Temperature structure function: DC bridge measurement of C_T using the same probes as 6 (AC system). In this case the current to the sensors was 5 ma. The C_T^2 calculation is the same as 6, with the

following system parameters

V_N^2 = (.0015 volt)^2 + velocity contribution

α = 0.0026, °C^{-1}

G = gain, typically 100

B = 20 V/Ω

d = .85 m

β = 0.004, °C^{-1}

(11) Air temperature: Thermistor mounted just forward of the microwave refractometer cavity.

$$T = -10\ V + 0.8, °C$$

(12) Air refractivity: NAC microwave refractometer. We have calculated N from this device using

$$N = 50\ V - N_o$$

with N_o = 53.5. More accurate values of N can be obtained by correcting for temperature, thermal time constant and air speed effects.

2. Data Acquisition

The data scanning system was controlled by an HP9825 (Hewlett-Packard) desktop computer using an IEEE 488-1975 interface bus (HP-IB). Each scan of all 12 variables required 3.2 seconds and is defined as a line of data. The computer accumulated 50 lines of data, defined as a file, which were recorded on the computer's magnetic tape cassette at 2.7 minute intervals as a split precision string array named R$[I], where I = 1 to 50. The local time corresponding to I = 1 was also recorded as a string T$, where T$ = "mm:dd:hh:nn:ss" or month:day:hour:minute:second. The cassette contains two tracks (0, 1) with 54 files per track for a maximum of nearly five hours of data.

The following short program illustrates the reading and decoding of the raw voltages.

```
dim  T$[14], R$[50,48], R 50,12]
ent "track - 0,1", T
ent "file#", F
trk T; ldf F, T$, R$
for I = 1 to 50
for J = 1 to 12
```

```
stf (R$[I, 4(J - 1) + 1, 4J]) → R[I,J]
next J
next I
```

At this point, R[I,J] contains the voltages read, where I = 1 to 50 (line #) and J = 1 to 12 (channel #). Note that this process requires the String/Adv Prog. ROM.

C. THEORETICAL FRAMEWORK

1. Surface Layer Scaling

Although this is primarily a data report, a considerable amount of the more advanced stages of analysis is expressed in concepts and quantities developed in atmospheric boundary layer theory. In view of this, we will sketch out those parts of the theory required to at least define the quantities that appear in the analysis. Those interested in a more complete treatment should refer to the AMS Workshop edited by Haugen (1973) or the recent paper by Kaimal, et al. (1976). This theory is usually called Monin-Obukhov Similarity (MOS).

The boundary layer is that part of the atmosphere where friction with and heating by the surface play an important part in the generation of turbulence. Near the surface the turbulence properties can be scaled in terms of the Reynolds stress, τ_o, and the surface sensible temperature flux, Q_o, using Monin-Obukhov Similarity, where departures from neutral equilibrium are parameterized by Z/L. The velocity and temperature are scaled by U_* and T_* and stability, L,

$$\tau_o = \rho U_*^2 \tag{1a}$$

$$Q_o = -u_* T_* \tag{1b}$$

$$L = \frac{T U_*^2}{\kappa g T_{V*}} \tag{1c}$$

where ρ is the density of air, Q_o is the surface sensible temperature flux, T is the absolute temperature, T_V the virtual potential temperature, g the acceleration of gravity, and κ is von Karman's constant (we have used κ = 0.35). T_{V*} is related to the water vapor mixing ratio scaling parameter, q_*,

by $$T_{V*} = T_* + 6.1 \times 10^{-4}\, T\, q_* \qquad (2)$$

The mean wind speed (U) and virtual potential temperature can be represented by the following height dependent gradients

$$\partial U/\partial Z = \frac{U_*}{\kappa Z}\,\phi_m\,(\xi) \qquad (3a)$$

$$\partial T_V/\partial Z = \frac{T_{V*}}{\alpha\kappa Z}\,\phi_H\,(\xi) \qquad (3b)$$

where $\xi = Z/L$, $\alpha = 1.35$ and ϕ_m and ϕ_H are stability correction functions.

The turbulence of the atmosphere manifests itself as fluctuations in wind velocity, temperature, and other properties. In the inertial subrange of locally isotropic turbulence (the so-called "5/3 region") the one-dimensional fourier power spectrum of fluctuations of wavenumber k can be represented as

$$S_U(k) = 0.52\,\varepsilon^{2/3}\,k^{-5/3} \qquad (4a)$$

$$S_T(k) = 0.25\,C_T^{\,2}\,k^{-5/3} \qquad (4b)$$

where ε is the rate of dissipation of turbulent kinetic energe and $C_T^{\,2}$ is the temperature structure function parameter. Near the surface, ε and $C_T^{\,2}$ can be scaled by MOS

$$\varepsilon = \frac{U_*^{\,3}}{\kappa Z}\,f_\varepsilon\,(\xi) \qquad (5a)$$

$$C_T^{\,2} = T_*^{\,2}\,Z^{-2/3}\,f_T(\xi) \qquad (5b)$$

2. Methods

The utility of MOS is that, for instance, given T_* and L, one can predict $C_T^{\,2}$ at any height Z within the surface layer. One problem immediately becomes obvious - how does one obtain the scaling parameters? Another major problem - to be discussed later - is the determination of the upper limits of the validity of the surface layer expressions.

We have used two methods of obtaining the scaling parameters for the PC II data which we designate the "turbulence" method and the "bulk" method. The turbulence method is based upon the utilization of Eq. 5 with turbulence data very near the surface ($Z/L << 1$). In this limit, the $f(\xi) \cong 1$, permitting a simple calculation of U_* and T_*. From Eq. 1c we can now evaluate L. A few iterations of this process result in self-consistent values for the various parameters.

The bulk method is based upon calculation of the scaling parameters from mean quantities only. Their relationship is obtained by integrating Eq. 3 from the surface to some reference height Z (usually 10 meters)

$$U = \frac{U_*}{\kappa} \left(\ell n\ Z/Z_o - \psi_1\ (\xi)\right) \tag{6a}$$

$$T_V - T_{Vo} = \frac{T_{V*}}{\alpha\kappa} \left(\ell n\ Z/Z_{oT} - \psi_2\ (\xi)\right) \tag{6b}$$

where Z_o and Z_{oT} are the roughness lengths for U and T, T_{Vo} is the sea surface virtual potential temperature, and $\psi(\xi)$ are stability correction functions. Since the details of this method are covered elsewhere (Davidson, et al., 1978 and Fairall, et al., 1978) we shall refrain from elaboration but will point out that U_* and T_* could be calculated from Eq. 6. Note that the atmospheric stability can also be expressed as

$$\xi = Z/L = \frac{\kappa g Z}{T} \frac{[\Delta\theta + .18\,\Delta q]}{U^2} \frac{C_{TN}^{\frac{1}{2}}}{C_{DN}} H(\xi) \tag{7}$$

where C_{TN} and C_{DN} are neutral stability drag coefficients and

$$H(\xi) = \frac{[1 - \kappa^{-1} C_{DN}^{\frac{1}{2}} \psi_1(\xi)]^2}{[1 - (\alpha\kappa)^{-1} C_{TN}^{\frac{1}{2}} \psi_2(\xi)]} \tag{8}$$

3. Above the Surface Layer

The MOS expressions are not valid throughout the entire boundary layer. Although the upper limits of validity are typically quoted as $Z \leq 50$ m, in fact, this limit is very dependent on stability, inversion height,

and probably other factors. It also appears that Eq. 5 can be valid to much greater heights than Eq. 3. This is a vital area of research in marine boundary layer dynamics and was the primary motivation for making the ladder profiles. Presumably this data can form part of a data set that can be used to investigate this problem.

D. DATA COMPARISON

The initial data analysis was conducted using the relationships and calibration factors described in Section II. After the results were output, selected measurements from the aircraft could be compared with surface measurements (courtesy of Calspan on Stage I) or in flight wet-dry bulb measurements. The actual value of these comparisons is contained more in their ability to illustrate confidence levels than in absolute standards since it is not obvious, a priori, which of the measurements is the "correct" one.

1. Stage I (Calspan) - Aircraft Comparison

For those flights requiring the aircraft to be in the vicinity of Stage I, a fly-by data comparison was arranged. The Calspan people would specifically record readings from their instruments when the low level fly-by occurred. The data was relayed later by telephone. This data is summarized in Table II with appropriate bulk calculations of the MOS scaling parameters (assuming a level height of 27 meters).

Measurements of air temperature, sea surface temperature and friction velocity from Stage I were compared with those of the aircraft (Table III). The sea surface temperatures agree quite well whereas the aircraft air temperatures are systematically about 1°C higher than Calspan's. Given the uncertainty in the aircraft values due to variations in line voltage, one would assume that the Calspan measurements are more accurate (however, one should note the wet-dry bulb comparisons). The aircraft measurements of U_* are obtained directly from the ϵ data, while the Stage I values are obtained from bulk calculations and are determined primarily by the wind speed.

TABLE II. CALSPAN STAGE I DATA WITH BULK CALCULATIONS OF MOS PARAMETERS

Date	Time	T_s (°C)	T (°C)	H (%)	U (m/sec)	U_* (m/sec)	T_* (°C)	q_* (g/kg)	L (m)
11/26	1250	22.5	22.0	66	11	.40	-.01	-.21	-280
12/02	1423	22.7	19.2	88	8	.30	-.12	-.18	- 50
12/04	1054	22.4	22.9	84	7	.23	.02	-.08	400
12/04	1443	22.6	23.6	92	7	.21	.04	-.01	110
12/05	1500	21.8	14.4	46	3.5	.13	-.31	-.50	- 3.8
12/06	1636	21.6	20.4	75	5.5	.19	-.03	-.18	- 50
12/07	1600	22.0	22.8	96	8	.26	.03	0	165
12/10	1520	20.5	8.0	50	8	.32	-.47	-.46	- 15
12/11	1020	20.9	7.3	49	3	.12	-.61	-.57	- 1.7

TABLE III. COMPARISON OF CALSPAN STAGE I DATA WITH AIRCRAFT DATA

Date	Ts SI	Ts Air	Δ	T SI	T Air	Δ	U_* SI	U_* Air	r
1/26	22.5	22.4	- .1	22.3	23.2	.9	.40	.40	1.0
12/02	21.7	22.6	.9	18.7	20.3	1.6	.30	.24	1.25
12/04	22.5	22.2	- .3	22.9	23.8	.9	.23	.24	.96
12/05	21.8	22.8	1.0	14.4	16.2	1.8	.13	.24	.54
12/06	21.6	22.2	.6	20.4	21.4	1.0			
12/07	22.0	21.8	- .2	22.8	23.8	1.0	.26	.23	1.13
12/10	20.5	22.1	.6	8.0	9.1	1.1	.32	.34	.94
12/11	20.9	21.0	.1	7.3	8.6	1.3	.12	.28	.43
Average			.3 $\pm$ .6			1.2 $\pm$ .3			.90 $\pm$ .3

The agreement for U_* is excellent except on 12/05 and 12/11. Since the winds were light and from a direction with possible tower influence, we suspect that the tower wind speeds were slightly low, although there are other possibilities (such as wave influence or inadequacies of the bulk model).

2. Wet-Dry Bulb to Aircraft Comparison

A complete listing of all in-flight wet-dry bulb measurements during PC II with corresponding values from the aircraft platinum temperature sensor and the NAC refractometer is given in Appendix A. Let us define the wet-dry bulb data as follows.

D = dry bulb temperature

e = measured value of water vapor pressure

N_c = value of N calculated from e

Let us also define the aircraft data as follows:

T = Pt air temperature

N = measured refractivity

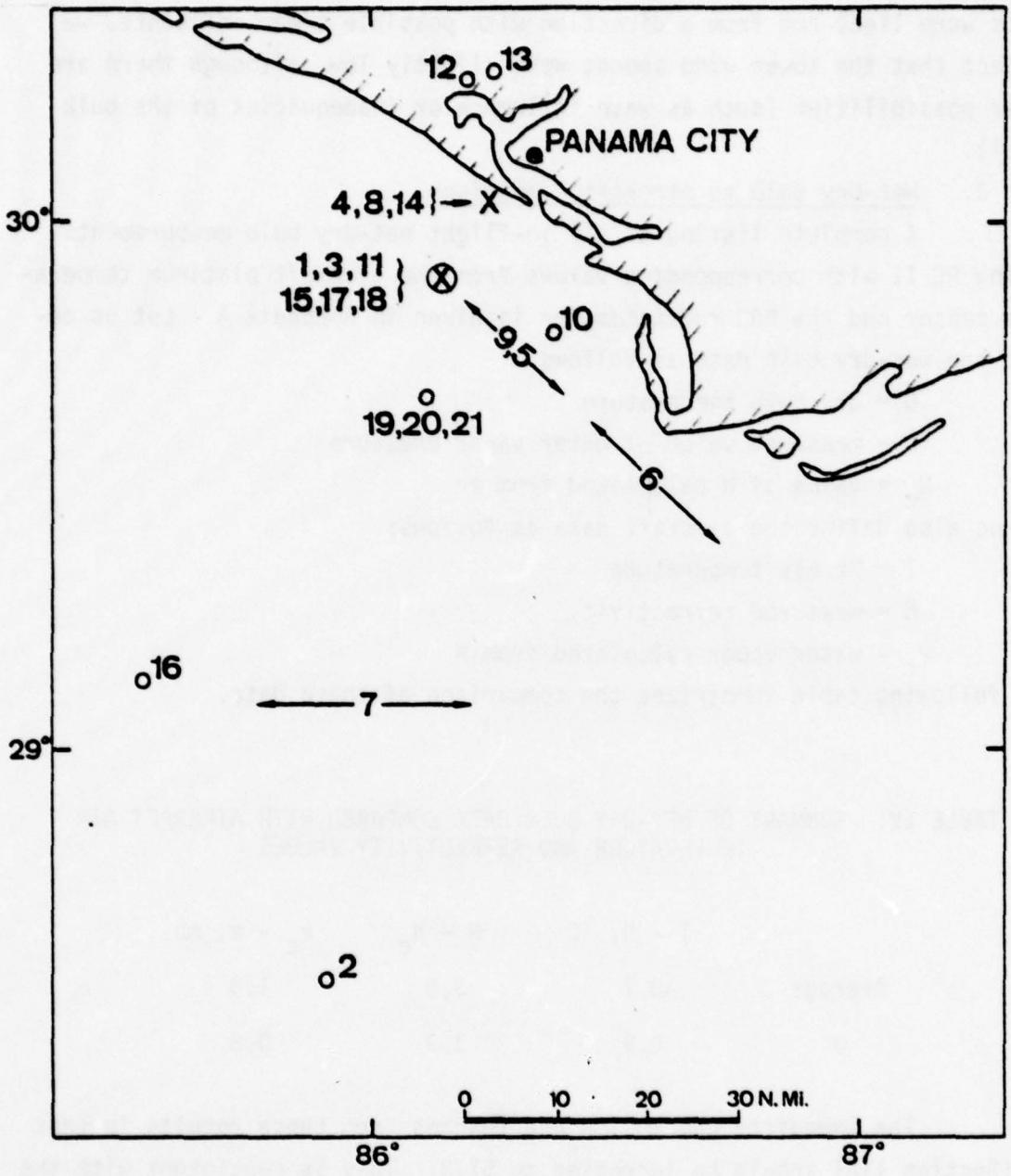
e_c = water vapor calculated from N

The following table summarizes the comparison of these data.

TABLE IV. SUMMARY OF WET-DRY BULB DATA COMPARED WITH AIRCRAFT AIR TEMPERATURE AND REFRACTIVITY VALUES

	T - D, °C	$N - N_c$	$e_c - e$, mb
Average	-0.1	3.8	1.0
σ	0.9	3.3	0.8

The immediate conclusion one reaches from these results is that N_o (Section IIA) should be increased to 57.3. This is consistent with the correction of 3.2 N units that one would expect due to the ram-air effect on the measurements at flight speed (the value of N_o = 53.5 was determined on the ground).



NOTE: The X and circled X represent Stage II and Stage I respectively. The numbers are the profile number designations.

Figure 1. Locations of Ladder Profiles for PC II

TABLE V. LADDER PROFILE MOS SCALING DATA FOR PC II. ALSO GIVEN ARE THE HEIGHT OF THE INVERSION (OR BOUNDARY LAYER THICKNESS), Z_i, AND THE NUMBER OF POINTS, N, IN THE PROFILE

Profile #	Date	Time	u* (m/s)	T* (C)	q* (gm/kg)	L (m)	Zi (m)	N
1	11/26	1252	0.400	-0.082	-0.160	-125	850	14
2	11/26	1436	0.290	-0.095	-0.160	-56	900	14
3	12/02	1405	0.240	-0.135	-0.180	-29	230	18
4	12/03	1108	0.290	0.030	0.000	233	200	11
5	12/03	1201	0.240	0.015	-0.018	420	60	10
6	12/03	1232	0.180	0.024	-0.009	120	60	9
7	12/03	1339	0.340	0.031	-0.040	403	120	11
8	12/05	1532	0.240	-0.260	-0.410	-15	700	10
9	12/05	1624	0.260	-0.270	-0.400	-16	700	13
10	12/07	1511	0.250	0.015	-0.007	390	75	12
11	12/07	1601	0.235	0.025	0.010	171	100	11
12	12/10	1259	0.530	-0.440	0.000	-53	760	10
13	12/10	1324	0.380	-0.350	0.000	-34	760	11
14	12/10	1410	0.320	-0.490	-0.490	-15	760	15
15	12/10	1523	0.340	-0.460	-0.470	-17	820	14
16	12/10	1637	0.340	-0.490	-0.500	-16	930	14
17	12/11	1021	0.280	-0.440	-0.430	-13	700	12
18	12/12	1642	0.280	-0.180	-0.500	-24	800	18
19	12/13	1154	0.190	-0.210	-0.470	-10	600	17
20	12/13	1459	0.170	-0.200	-0.420	-9	550	14
21	12/13	1721	0.140	-0.120	-0.440	-5	450	17

E. RESULTS

1. Interpretation

The time series printouts (Appendix B) are intended as reasonable representations of the relevant data for each flight. The following are not included:

(1) Flight, 7 and 10, which were equipment test flights.

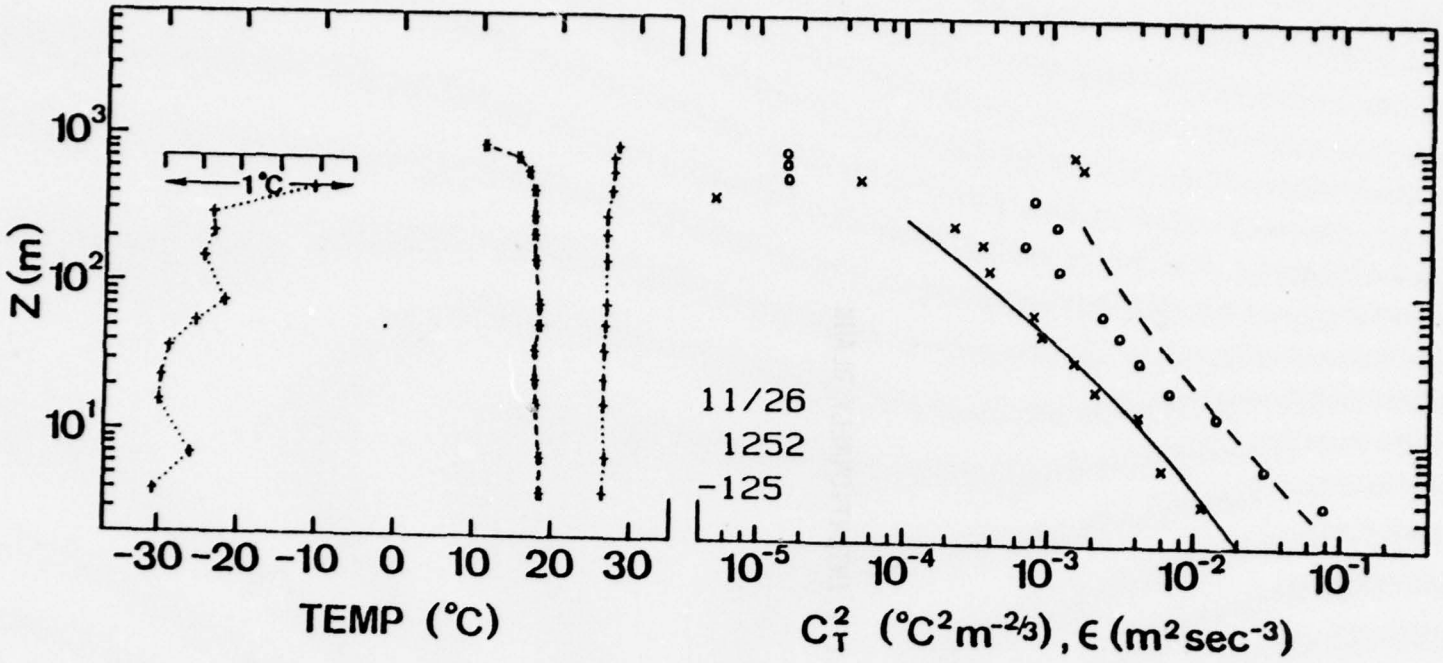
(2) Data from the beginning and end of the flight, which were overland and greatly contaminated with radio traffic.

(3) Redundant or non-functional instruments.

No attempt has been made to eliminate data affected by RFI since some instruments were relatively uninfluenced. The data most severely affected by RFI were C_T^2, ε, E, N and e. The presence of RFI is most easily detected by looking for sudden, dramatic (even incredible) changes in these parameters. For instance, on Flight 1 at 1248:19, ε changed from 10^{-4} (a reasonable value) to 10^{2} (totally unreasonable) while e actually went negative - a sure indication that the pilot was using the radio.

2. Ladder Profiles

The ladder profiles provide a picture of the boundary layer and the regions of validity of the surface layer scaling. The MOS scaling data for each profile are given in Table V. The locations of the profiles are shown in Figure 1 according to profile number. An example of a ladder profile (Figure 2) is shown for illustration and explanation. The left hand part of the graph shows the mean data (virtual potential temperature and dew point), the right hand side shows the turbulence data (C_T^2 and ε). The extreme left hand side is a "blow-up" of the virtual potential temperature on a 1°C scale. The lines on the turbulence graph represent the MOS expressions (Eq. 5) where the values of U_* and T_* have been selected to force the MOS expressions to fit the lowest two or three data points. The value of q_* was obtained simply from $q_* = -.36\ (q_s - q)$ where q_s is the sea surface value and q is the value at Z = 10 meters. In this example, the boundary layer is approximately 800 meters thick as indicated by the strong peak in C_T^2 and the sharp drop off in the dew point.



NOTE: The data points plotted are virtual potential temperature (+), dew point (*), C_T^2 (x), and ε(o). The solid line is the MOS for C_T^2 and the long-dash line is the MOS expression for ε. The extreme left hand side of the graph shown an expanded scale plot of virtual potential temperature.

Figure 2. Profile #1 on 11/26 at 1252 Local Time with L = -125

APPENDICES

APPENDIX A

WET-DRY BULB DATA AND COMPARISON WITH OTHER AIRCRAFT INSTRUMENTS

Z, altitude
P, pressure
W, wet bulb temperature
D, dry bulb temperature
e, partial pressure of water vapor
H, relative humidity
N_c, resultant calculation of N from e
T, Rosemount temperature
N, microwave refractometer value of N
e, resultant from N

$$N = \frac{77.6\ P}{(T + 273)} \qquad \frac{3.73 \times 10^5\ e}{(T + 273)^2}$$

Flt #	Date	Time start	Time end	Z ft	P mb	W °C	D °C	e mb	H %	N_c	T °C	N	e_c mb
1	11/26	1235	1237	2000	940	16.1	18.3	16.9	80	321			
		1245	1247	700	988	18.3	21.4	19.1	75	343	21.4	343	19.2
		1303	1306	120	1007	18.9	23.9	18.5	62	343	23.2	346	19.4
		1328	1329	2500	920	14.7	17.2	15.2	77	314	17.1	322	17.2
		1342	1344	9500	705	2.8	11.9	3.1	22	206	12.0	213	4.6
		1443	1445	7000	777	5.0	14.4	3.8	23	226	15.2	225	3.5
2	12/02	1421	1424	100	1015	17.8	20.0	18.8	81	350	20.2	355	19.9
		1445	1446	2000	945	17.8	20.0	17.8	81	329	19.2	343	20.8
		1523	1527	14000	600	-4.7	2.8	1.3	18				
3	12/03	1120	1122	150	1013	22.2	23.9	25.7	87	374	23.9	382	27.7
		1232	1234	150	1008	22.8	25.0	26.2	83	373	24.8	382	28.4
		1256	1259	2500	925	16.1	21.9	14.7	56	307	21.9	316	16.9
4	12/05	1648	1650	300	1003	8.7	15.0	7.3	43	303	15.3	309	8.6
		1701	1706	3000	910	4.4	16.9	0.8	4	248	16.1	250	1.3
		1714	1716	5000	835	5.0	17.2	1.9	10	231	17.6	333	2.1
5	12/06	1601	1605	500	1002	15.3	21.7	13.1	51	320	21.6	321	13.5
		1651	1654	2000	948	13.9	16.4	14.3	77	315	18.8	315	14.4
		1710	1713	9000	729	0.8	11.1	1.5	11	206	11.5	209	2.6

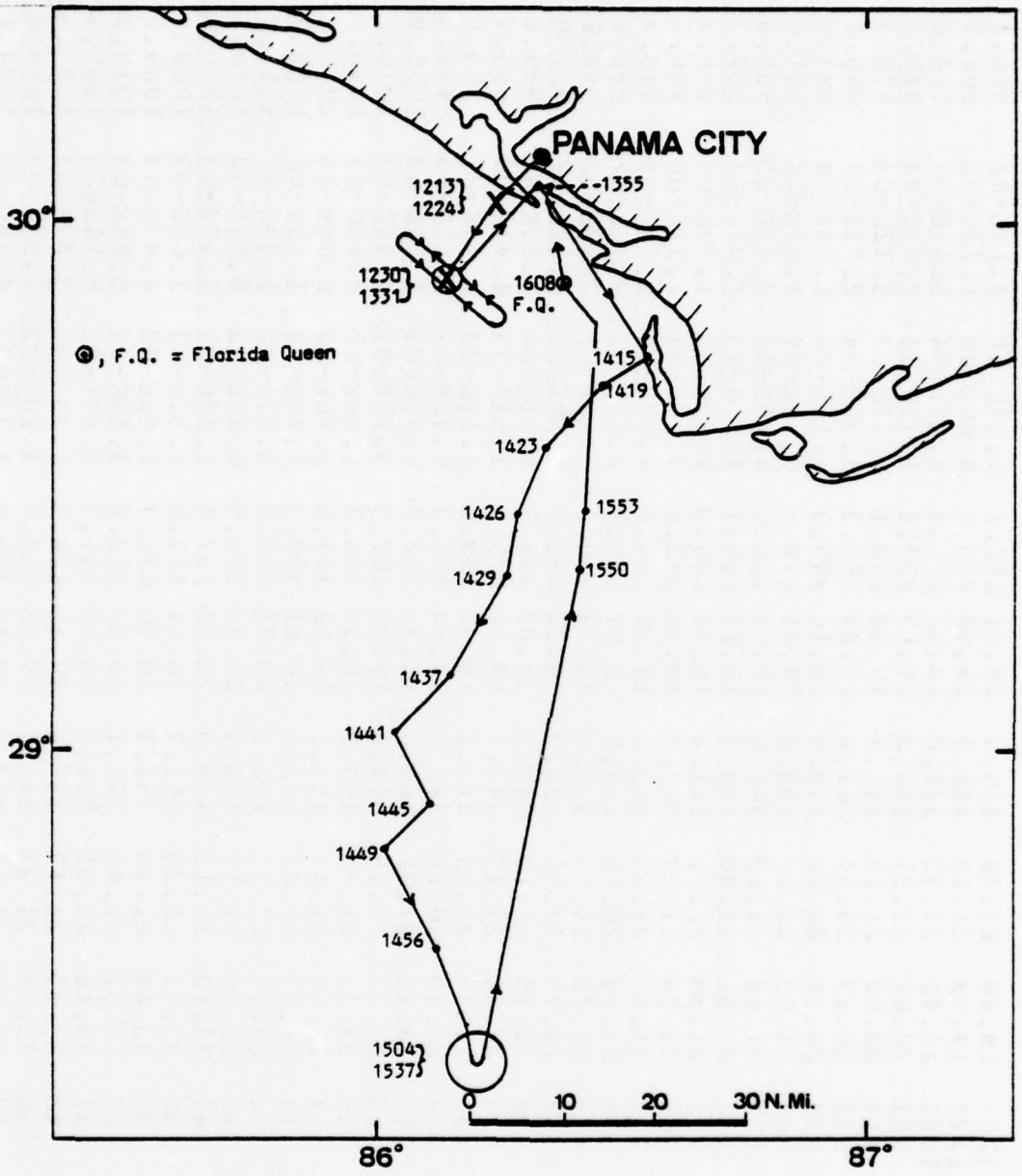
Flt #	Date	Time start	Time end	Z ft	P mb	W °C	D °C	e mb	H %	N_c	T °C	N	e_c mb
6	12/07	1450	1451	3500	895	15.6	21.7	14.0	54	296	21.3		
		1453	1455	5000	850	13.9	19.2	12.9	58	283	18.3	290	13.4
		1543	1545	2000	940	18.3	23.2	17.9	63	324	23.3	329	18.9
		1629	1631	2000	946	18.1	23.6	17.2	59	320	23.7	325	18.4
8	12/10	1423	1426	5000	860	0.3	7.2	2.3	22	251	5.6	249	2.0
		1431	1433	2500	937	-0.3	4.4	3.0	36	279	2.0	287	4.3
		1441	1444	1000	990	0.6	5.6	3.1	34	291	5.3	297	4.5
		1500	1503	100	1025	2.8	8.3	3.7	34	300	8.5	305	5.1
		1600	1603	4000	890	0.3	7.2	2.1	21	250	5.6	257	2.0
9	12/11	1030	1033	40	1031	3.9	8.9	4.6	41	306	8.6	313	6.2
		1059	1100	5000	859	0.6	10.0	0.9	8	240	9.4	240	1.2
12	12/13	1215	1219	200	1024	8.3	14.4	6.8	41	307	14.4	307	7.0
		1235	1237	2000	960	3.9	11.1	3.5	26	278	11.1	281	4.1
13	12/13	1523	1525	250	1000	7.8	13.9	6.5	41	300	14.0	302	7.1

APPENDIX B

FLIGHT DATA TIME SERIES PRINTOUT FOR PC II

This appendix contains flight data time series printout (about 32 second average time) for PC II. Figures B-1 through B-14 illustrate the flight path for the subsequent printout. The following symbols are used for the printouts:

Alt, altitude
T, temperature (Pt resistor)
T_S, Barnes IR sea surface temperature
N, microwave refractivity
e, partial pressure of water vapor (from N)
E, electric field
Eps, rate of dissipation of turbulent kinetic energy (ε)
C_T^2, temperature structure function parameter
P, atmospheric pressure



NOTE: Numbers give time in Central Standard Time

Figure B-1. Flight 1 Flight Track

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 41 24	1263	19.46	23.38	339.3	19.04	242.2	3.07E 01	9.15E-02	966.9
12 41 56	1223	19.89	21.16	341.4	19.58	236.4	9.90E-04	1.72E-03	968.3
12 42 28	1057	20.42	21.33	341.0	19.32	241.4	6.29E-04	1.47E-04	974.0
12 43 0	951	20.61	21.31	340.9	19.13	253.4	9.37E-04	2.21E-04	977.6
12 43 32	914	20.62	21.13	341.7	19.24	258.1	1.67E-03	3.32E-04	978.9
12 44 4	872	20.67	20.94	341.4	19.09	258.3	8.09E-04	2.31E-04	980.4
12 44 36	829	20.76	20.96	342.0	19.18	245.9	1.18E-03	1.65E-04	981.9
12 45 8	749	21.03	21.07	340.8	18.81	270.9	6.30E-04	1.88E-04	984.6
12 45 40	645	21.44	21.19	341.6	18.91	256.0	8.16E-04	9.44E-05	988.3
12 46 12	662	21.36	21.06	342.3	19.10	266.7	1.11E-03	1.07E-04	987.7
12 46 43	701	21.38	21.01	342.4	19.22	266.0	1.25E-03	1.70E-04	986.3
12 47 15	703	21.54	21.28	342.8	19.35	292.8	9.98E-04	1.91E-04	986.3
12 47 47	734	21.52	21.29	342.2	19.28	294.9	8.92E-04	8.69E-05	985.2
12 48 19	570	21.04	20.71	248.8	-2.91	259.9	2.40E 02	-2.90E-02	990.9
12 48 51	478	21.70	24.50	342.2	18.78	290.3	3.30E 01	2.83E-02	994.1
12 49 23	369	21.25	29.58	290.2	6.32	292.9	2.50E 02	6.34E-02	997.9
12 49 55	435	22.15	21.19	342.9	19.02	339.9	9.61E-04	1.03E-02	995.6
12 50 27	433	22.04	21.17	343.1	19.02	325.7	1.53E-03	4.91E-04	995.7
12 50 59	436	21.99	20.89	343.1	19.02	299.1	1.11E-03	2.15E-04	995.6
12 51 31	430	21.99	20.80	342.9	18.94	316.3	4.48E-02	5.45E-05	995.8
12 52 3	145	23.13	21.01	345.5	19.33	302.7	9.67E-03	1.80E-03	1005.9
12 52 35	23	23.34	21.49	349.0	19.96	387.5	3.78E-02	6.96E-03	1010.2
12 53 7	15	23.33	21.53	350.2	20.22	389.2	5.60E-02	9.40E-03	1010.5
12 53 39	11	23.29	21.41	351.1	20.42	393.6	5.76E-02	8.04E-03	1010.6
12 54 11	10	23.27	21.44	352.0	20.61	332.3	7.94E-02	1.15E-02	1010.7
12 54 43	8	23.27	21.31	352.6	20.75	358.0	6.77E-02	1.03E-02	1010.7
12 55 15	10	23.26	21.17	352.9	20.83	393.5	6.15E-02	9.19E-03	1010.6
12 55 47	41	23.10	21.11	349.6	20.06	397.4	1.67E-02	4.27E-03	1009.6
12 56 19	32	23.32	21.26	351.7	20.61	327.0	2.57E-02	3.65E-03	1009.9
12 56 51	35	23.44	21.45	351.1	20.50	430.7	2.52E-02	4.87E-03	1009.7
12 57 22	27	23.52	21.46	351.1	20.53	422.5	3.13E-02	5.88E-03	1010.0
12 57 54	31	23.48	21.51	350.0	20.25	441.2	2.40E-02	5.56E-03	1009.9
12 58 26	48	23.31	21.47	348.8	19.96	424.6	1.73E-02	3.47E-03	1009.3
12 58 58	56	23.24	21.23	348.7	19.93	413.7	1.10E-02	2.95E-03	1009.0
12 59 30	54	23.33	21.16	347.3	19.63	350.7	1.33E-02	4.80E-03	1009.1
13 0 2	58	23.24	21.06	348.7	19.93	362.5	1.31E-02	3.22E-03	1009.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 0 34	60	23.32	21.05	347.8	19.74	424.1	1.18E-02	3.49E-03	1008.9
13 1 6	77	23.24	21.03	347.6	19.71	421.5	5.08E-03	1.79E-03	1008.3
13 1 38	78	23.21	21.01	346.9	19.55	428.8	5.51E-03	1.67E-03	1008.2
13 2 10	76	23.22	21.03	347.7	19.72	416.7	5.50E-03	2.10E-03	1008.3
13 2 42	90	23.28	21.03	345.1	19.17	428.8	4.68E-03	1.92E-03	1007.8
13 3 14	127	23.06	20.93	344.9	19.11	363.6	2.45E-03	2.15E-03	1006.5
13 3 46	117	23.22	20.92	345.5	19.30	340.8	2.69E-03	9.20E-04	1006.8
13 4 18	121	23.20	21.03	345.3	19.25	412.5	3.45E-03	1.17E-03	1006.7
13 4 50	120	23.19	20.99	345.9	19.40	416.6	3.69E-03	1.45E-03	1006.7
13 5 22	138	23.13	20.96	345.9	19.40	412.9	4.21E-03	1.21E-03	1006.1
13 5 54	190	22.99	20.90	346.9	19.71	359.0	2.52E-03	1.42E-03	1004.2
13 6 26	207	23.12	20.84	346.7	19.75	389.3	4.46E-03	1.24E-03	1003.7
13 6 58	215	23.10	20.91	348.4	20.14	413.8	2.65E-03	1.19E-03	1003.4
13 7 30	195	22.94	21.11	347.5	19.85	403.1	2.96E-03	9.65E-04	1004.1
13 8 1	190	22.99	21.22	348.5	20.09	396.9	2.29E-03	8.73E-04	1004.3
13 8 33	196	23.04	21.21	350.3	20.53	421.9	2.70E-03	6.94E-04	1004.1
13 9 5	201	23.03	21.21	349.2	20.28	416.4	3.27E-03	7.35E-04	1003.9
13 9 37	190	23.16	21.34	349.7	20.43	422.8	2.64E-03	9.31E-04	1004.3
13 10 9	240	23.04	21.33	350.0	20.55	343.6	1.75E-03	8.89E-04	1002.5
13 10 41	261	22.94	21.31	349.2	20.38	409.8	1.68E-03	6.98E-04	1001.7
13 11 13	245	22.96	21.29	348.4	20.17	398.6	1.28E-03	4.99E-04	1002.3
13 11 45	261	22.91	21.39	348.5	20.21	399.1	2.51E-03	7.73E-04	1001.7
13 12 17	282	22.85	21.35	347.5	19.99	383.2	1.66E-03	8.51E-04	1001.0
13 12 49	458	22.23	21.26	346.0	19.82	329.6	1.52E-03	3.64E-04	994.8
13 13 21	517	22.04	21.31	345.1	19.67	345.2	1.52E-03	3.75E-04	992.8
13 13 53	497	22.20	21.38	345.0	19.66	339.9	1.01E-03	3.61E-04	993.5
13 14 25	490	22.24	21.43	343.7	19.36	353.9	3.59E-04	2.21E-04	993.7
13 14 57	426	20.64	32.48	239.0	-5.57	343.0	3.30E 02	6.43E-02	996.0
13 15 29	466	20.74	32.01	277.8	3.53	325.3	2.09E 02	1.08E-01	994.5
13 16 1	775	21.41	21.13	342.3	19.36	316.9	7.73E-04	3.09E-03	983.7
13 16 33	789	21.40	21.27	342.9	19.51	331.0	5.61E-04	2.00E-04	983.3
13 17 5	779	21.47	21.34	343.4	19.63	350.4	5.18E-04	9.60E-05	983.6
13 17 37	765	21.50	21.33	342.7	19.46	339.1	7.47E-04	1.41E-04	984.1
13 18 9	730	21.60	21.27	342.4	19.34	338.7	9.15E-04	1.02E-04	985.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 18 40	1007	20.69	21.22	341.1	19.33	307.4	9.20E-04	1.63E-04	975.7
13 19 12	1062	20.56	21.22	341.7	19.54	315.0	1.13E-03	2.14E-04	973.8
13 19 44	1000	20.85	21.37	342.1	19.59	327.5	7.90E-04	1.60E-04	975.9
13 20 16	1017	20.72	21.30	341.2	19.39	322.9	6.80E-04	1.97E-04	975.4
13 20 48	1007	20.80	21.29	341.3	19.41	322.3	7.63E-04	1.45E-04	975.7
13 21 20	1216	20.47	21.35	340.1	19.47	305.7	4.25E-04	4.77E-06	968.5
13 21 52	1541	19.67	21.18	337.7	19.31	270.6	1.27E-03	-1.91E-05	957.4
13 22 24	1595	19.50	21.06	337.2	19.27	270.9	5.82E-04	-5.11E-06	955.6
13 22 56	1491	19.89	21.29	338.1	19.38	281.1	6.19E-04	2.58E-05	959.1
13 23 28	1512	19.73	21.25	338.6	19.50	273.7	7.06E-04	4.13E-07	958.4
13 24 0	1846	19.02	21.12	334.3	18.97	242.1	6.57E-04	1.48E-05	947.0
13 24 32	2062	18.43	20.96	330.8	18.40	229.9	5.34E-04	3.71E-05	939.8
13 25 4	2063	18.52	21.04	331.7	18.65	223.5	4.33E-04	3.78E-05	939.8
13 25 36	2117	18.44	21.10	330.6	18.48	223.1	4.98E-04	2.03E-05	937.9
13 26 8	2379	17.91	21.05	324.3	17.40	206.2	5.81E-04	2.74E-04	929.2
13 26 39	2587	17.20	20.93	322.7	17.23	184.0	7.51E-06	1.33E-03	922.3
13 27 11	2699	16.99	20.71	321.0	17.02	168.1	1.49E-05	1.53E-03	918.6
13 27 43	2720	17.11	20.62	321.1	17.11	169.2	9.84E-06	1.11E-03	918.0
13 28 15	2689	17.16	20.68	322.0	17.28	172.5	1.99E-05	1.68E-03	919.0
13 28 47	2582	17.26	20.91	323.1	17.34	178.3	4.75E-05	5.92E-04	922.5
13 29 19	2840	17.01	20.95	312.4	15.36	149.1	2.55E-05	1.53E-03	914.0
13 29 51	3111	16.46	20.67	303.0	13.61	99.7	1.65E-05	1.10E-03	905.2
13 30 23	3181	16.51	20.66	296.0	12.18	86.2	1.29E-05	1.61E-03	902.9
13 30 55	3124	17.00	20.84	297.9	12.64	81.6	5.19E-06	8.19E-04	904.7
13 31 27	3074	16.80	21.01	304.4	13.95	106.8	1.43E-05	1.50E-03	906.3
13 31 59	3452	16.71	20.82	286.3	10.59	69.9	1.36E-04	5.41E-04	894.1
13 32 31	3805	16.40	20.71	280.2	9.81	48.9	1.10E-04	1.14E-03	882.8
13 33 3	4141	15.82	20.67	296.0	13.84	65.8	4.69E-05	5.93E-04	872.2
13 33 35	4472	15.07	20.53	293.9	13.79	63.8	3.14E-05	3.60E-04	861.8
13 34 7	4759	14.37	20.51	295.6	14.51	76.0	4.61E-05	5.29E-04	852.8
13 34 39	5151	14.26	20.54	278.0	11.32	64.2	7.60E-05	6.31E-04	840.8
13 35 11	5553	14.16	20.38	261.6	8.38	45.6	9.69E-05	1.64E-04	828.5
13 35 43	5896	13.93	20.28	251.3	6.68	39.9	1.75E-04	5.69E-04	818.2
13 36 15	6234	13.62	20.15	243.7	5.53	34.1	1.10E-04	2.54E-04	808.1

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 36 47	6570	13.74	20.03	234.3	4.06	29.1	1.21E-04	4.72E-04	798.2
13 37 18	6929	13.05	20.04	238.5	5.49	26.3	4.18E-04	2.54E-04	787.7
13 37 50	7255	12.52	20.12	237.0	5.61	24.8	5.40E-05	3.36E-04	778.3
13 38 22	7599	12.30	19.83	233.9	5.47	22.4	2.60E-04	3.41E-04	768.4
13 38 54	7932	12.80	19.70	223.7	3.90	21.2	1.05E-04	4.53E-04	759.0
13 39 26	8239	12.81	19.74	220.1	3.63	18.0	4.46E-04	5.45E-04	750.4
13 39 58	8658	12.48	19.58	217.3	3.64	13.3	5.22E-04	2.36E-04	738.7
13 40 30	8949	12.73	19.48	216.0	3.87	11.6	9.00E-05	5.53E-04	730.7
13 41 2	9218	12.78	19.40	215.8	4.29	13.6	1.15E-04	5.35E-04	723.4
13 41 34	9566	12.02	19.43	213.7	4.25	15.1	1.35E-03	3.37E-04	714.0
13 42 6	9821	11.98	19.57	213.9	4.68	7.2	6.96E-04	4.05E-04	707.2
13 42 38	9896	12.14	19.87	213.6	4.75	7.7	6.68E-04	2.10E-04	705.2
13 43 10	9961	12.05	19.95	212.9	4.69	8.8	3.07E-04	2.23E-04	703.5
13 43 42	9901	11.81	19.87	212.4	4.45	7.3	3.68E-04	3.37E-04	705.1
13 44 14	10031	11.51	19.94	210.2	4.12	17.4	2.18E-04	3.79E-04	701.6
13 44 46	10429	10.47	19.88	207.7	4.01	17.9	8.84E-04	2.33E-04	691.2
13 45 18	10776	9.86	19.68	206.1	4.11	14.6	2.54E-03	2.49E-04	682.1
13 45 50	11092	9.29	19.41	204.7	4.19	12.1	1.61E-04	4.90E-04	674.0
13 46 22	11377	8.82	19.29	203.1	4.18	10.5	2.88E-04	4.09E-04	666.7
13 46 54	11555	8.09	16.69	196.9	3.02	9.1	8.87E 00	5.70E-03	662.2
13 47 26	11825	7.75	19.29	199.7	3.95	10.4	1.61E-01	8.44E-03	655.4
13 47 57	12090	6.81	19.61	198.4	3.91	11.2	1.16E-03	3.23E-04	648.8
13 48 29	12246	6.58	19.67	197.9	4.00	12.0	2.02E-04	3.19E-04	645.0
13 49 1	12456	5.84	18.59	174.9	-0.64	12.4	3.16E 00	4.61E-03	639.8
13 49 33	12828	5.10	20.83	195.8	4.13	15.6	2.09E-04	4.17E-04	630.7
13 50 5	13115	4.42	20.69	194.2	4.09	13.3	6.19E-04	4.10E-04	623.8
13 50 37	13474	3.65	19.94	193.4	4.30	11.8	8.97E-04	2.84E-04	615.2
13 51 9	13791	3.11	19.71	190.5	4.06	8.4	6.90E-05	2.86E-04	607.7
13 51 41	14119	2.57	20.52	188.9	4.08	6.3	1.60E-04	2.76E-04	600.0
13 52 13	14413	1.98	19.88	186.1	3.82	5.5	7.32E-05	2.31E-04	593.2
13 52 45	14632	1.68	20.54	184.7	3.79	4.2	3.98E-04	2.60E-04	588.1
13 53 17	14972	0.80	20.60	182.9	3.74	5.1	8.57E-05	1.97E-04	580.4
13 53 49	15181	0.40	20.37	181.9	3.74	5.2	5.08E-05	2.37E-04	575.7
13 54 21	15387	-0.03	20.06	180.2	3.60	4.9	1.62E-04	2.49E-04	571.0
13 54 53	15611	-0.50	18.48	161.1	-0.00	5.0	1.61E 00	1.51E-03	566.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 55 25	15577	-0.82	16.95	115.3	-9.19	1.6	1.40E 01	1.38E-02	566.8
13 55 56	15987	-1.94	15.02	152.2	-1.45	15.0	1.18E 01	1.49E-02	557.7
13 56 28	16316	-2.20	20.98	173.8	3.18	20.6	1.39E-02	3.67E-03	550.5
13 57 0	16482	-2.45	21.65	172.1	3.01	18.8	5.52E-05	3.04E-04	546.9
13 57 32	16757	-2.95	20.74	170.4	2.94	16.0	7.01E-03	2.42E-04	541.0
13 58 4	17035	-3.43	19.61	169.0	2.95	11.8	4.74E-01	-2.49E-04	535.1
13 58 36	17359	-3.75	19.67	167.6	3.02	11.7	2.82E-04	3.49E-04	528.2
13 59 8	17673	-4.20	19.84	166.8	3.17	11.4	4.31E-04	5.36E-04	521.7
13 59 40	17902	-4.59	20.69	168.1	3.63	10.1	2.03E-04	3.69E-04	516.9
14 0 12	18167	-5.21	20.49	167.6	3.76	6.7	2.06E-04	3.99E-04	511.5
14 0 44	18423	-5.76	21.03	166.4	3.74	6.8	5.56E-05	5.51E-04	506.2
14 1 15	18657	-6.25	20.94	165.2	3.71	5.0	2.27E-04	5.93E-04	501.5
14 1 47	18898	-6.81	21.45	163.9	3.65	-3.6	2.95E-04	5.73E-04	496.7
14 2 19	19195	-7.75	21.02	162.9	3.68	-3.3	1.27E-04	5.02E-04	490.8
14 2 51	19430	-8.21	20.78	161.1	3.53	-3.7	6.78E-05	5.33E-04	486.1
14 3 23	19671	-8.74	20.93	159.7	3.46	-0.4	9.34E-05	5.52E-04	481.4
14 3 55	19995	-9.56	21.06	157.4	3.27	7.9	1.26E-04	5.22E-04	475.1
14 4 27	20185	-9.84	20.72	157.1	3.38	7.0	3.35E-04	6.41E-04	471.5
14 4 59	20344	-10.66	19.37	144.5	1.12	7.1	6.21E-01	2.36E-03	468.4
14 5 31	20497	-11.26	18.68	156.6	3.43	6.4	4.29E 00	5.08E-03	465.5
14 6 3	20604	-11.89	18.31	118.4	-3.51	8.9	7.45E 00	1.12E-02	463.5
14 6 35	21060	-12.01	18.68	157.2	4.03	8.5	1.22E-03	6.33E-04	454.9
14 7 7	21304	-12.57	18.78	156.3	4.04	11.0	1.05E-03	2.77E-04	450.4
14 7 39	21535	-13.03	18.80	156.0	4.15	5.7	4.46E-03	4.96E-04	446.1
14 8 11	21775	-13.15	18.99	154.3	4.07	1.2	3.84E-03	3.59E-04	441.8
14 8 43	22011	-13.64	19.36	152.3	3.89	9.0	3.12E-03	1.94E-04	437.5
14 9 14	22262	-14.07	19.36	150.4	3.73	7.5	3.70E-03	1.72E-04	433.0
14 9 46	22497	-14.73	19.26	149.6	3.74	6.6	2.38E-03	2.14E-04	428.8
14 10 18	22693	-15.24	19.19	149.1	3.77	6.4	3.05E-03	1.87E-04	425.3
14 10 50	22868	-15.61	19.17	148.4	3.77	-8.6	3.53E-02	5.75E-04	422.2
14 11 22	22869	-15.77	16.65	127.0	-0.05	-123.2	4.15E 00	4.56E-03	422.2
14 11 54	23009	-15.90	18.74	146.7	3.57	28.8	7.95E-02	1.35E-03	419.8
14 12 26	22854	-15.59	19.97	146.1	3.36	-19.0	3.16E-03	4.76E-04	422.5
14 12 58	22727	-15.14	19.87	145.4	3.16	-0.3	1.81E-04	3.25E-04	424.7
14 13 30	22544	-14.63	18.71	145.5	3.05	-4.6	1.18E-03	3.93E-04	427.9

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 14 2	22208	-13.77	16.62	146.7	3.05	-15.0	3.96E-02	1.26E-03	433.9
14 14 33	21539	-11.87	19.57	148.1	2.86	-13.4	3.70E-05	4.73E-04	446.1
14 15 5	20989	-10.51	20.26	148.9	2.61	-5.2	1.00E-04	2.62E-04	456.2
14 15 37	20689	-10.12	20.43	149.9	2.54	-4.2	5.72E-04	2.88E-04	461.9
14 16 9	20411	-9.66	20.53	149.7	2.26	-3.5	1.45E-03	6.95E-04	467.1
14 16 41	20155	-9.20	20.54	149.4	1.98	-2.5	2.02E-04	4.81E-04	472.0
14 17 13	19751	-7.95	20.56	147.6	1.37	-1.6	1.00E-03	2.88E-04	479.8
14 17 45	19426	-7.12	20.57	148.1	1.19	-2.2	3.16E-04	1.85E-04	486.2
14 18 17	19133	-6.46	20.52	149.2	1.16	-2.6	1.20E-04	1.66E-04	492.0
14 18 49	18847	-5.86	20.34	151.2	1.29	-1.5	1.85E-04	2.61E-04	497.7
14 19 21	18541	-5.18	20.59	153.4	1.45	-1.1	2.39E-04	1.61E-04	503.8
14 19 53	18192	-4.19	19.75	154.7	1.41	1.8	3.70E-04	1.05E-04	510.9
14 20 25	17902	-3.33	20.34	155.4	1.33	2.5	6.47E-04	1.17E-04	516.9
14 20 57	17594	-2.40	20.13	156.1	1.20	3.5	3.12E-04	1.36E-04	523.3
14 21 29	17266	-1.52	20.92	156.5	0.99	-1.4	7.09E-04	1.59E-04	530.2
14 22 1	17012	-0.93	20.93	155.8	0.63	-6.4	6.42E-03	2.20E-04	535.6
14 22 34	16719	-0.27	20.49	156.4	0.47	-9.1	2.56E-03	1.24E-04	541.8
14 23 6	16462	-0.06	19.83	158.0	0.50	-8.5	3.73E-04	1.73E-04	547.4
14 23 38	16172	-0.04	21.08	160.8	0.70	-8.0	2.71E-03	1.61E-04	553.7
14 24 10	15915	0.25	21.16	161.3	0.51	-8.5	6.32E-05	4.68E-04	559.3
14 24 42	15608	0.92	21.17	164.0	0.76	-10.1	2.15E-05	6.12E-04	566.1
14 25 14	15295	1.43	21.33	167.1	1.04	-9.9	3.10E-05	2.26E-04	573.1
14 25 46	14951	2.37	21.28	168.7	1.05	1.0	2.43E-05	2.28E-04	580.9
14 26 18	14660	3.12	21.28	169.9	1.00	4.6	2.67E-05	1.93E-04	587.5
14 26 50	14337	4.07	21.39	171.2	0.97	5.1	2.10E-05	2.25E-04	594.9
14 27 22	14083	4.67	21.45	172.4	0.95	4.4	1.73E-05	2.06E-04	600.9
14 27 54	13771	5.53	21.22	173.9	0.96	3.6	2.42E-05	2.00E-04	608.2
14 28 26	13530	5.94	20.89	175.4	0.99	3.2	1.64E-05	1.30E-04	613.9
14 28 58	13235	6.16	20.64	177.6	1.06	-0.7	1.54E-05	1.09E-04	620.9
14 29 30	12953	6.56	19.73	180.4	1.33	-6.5	1.41E-05	1.01E-04	627.7
14 30 2	12687	7.18	21.54	182.2	1.41	-8.2	1.54E-05	1.01E-03	634.2
14 30 33	12368	7.74	21.60	183.9	1.40	-9.9	1.32E-05	2.38E-04	642.0
14 31 5	12036	8.49	21.69	185.4	1.33	-8.4	1.39E-05	1.04E-04	650.2
14 31 37	11640	9.32	22.04	186.8	1.17	-1.8	1.15E-05	4.98E-04	660.1

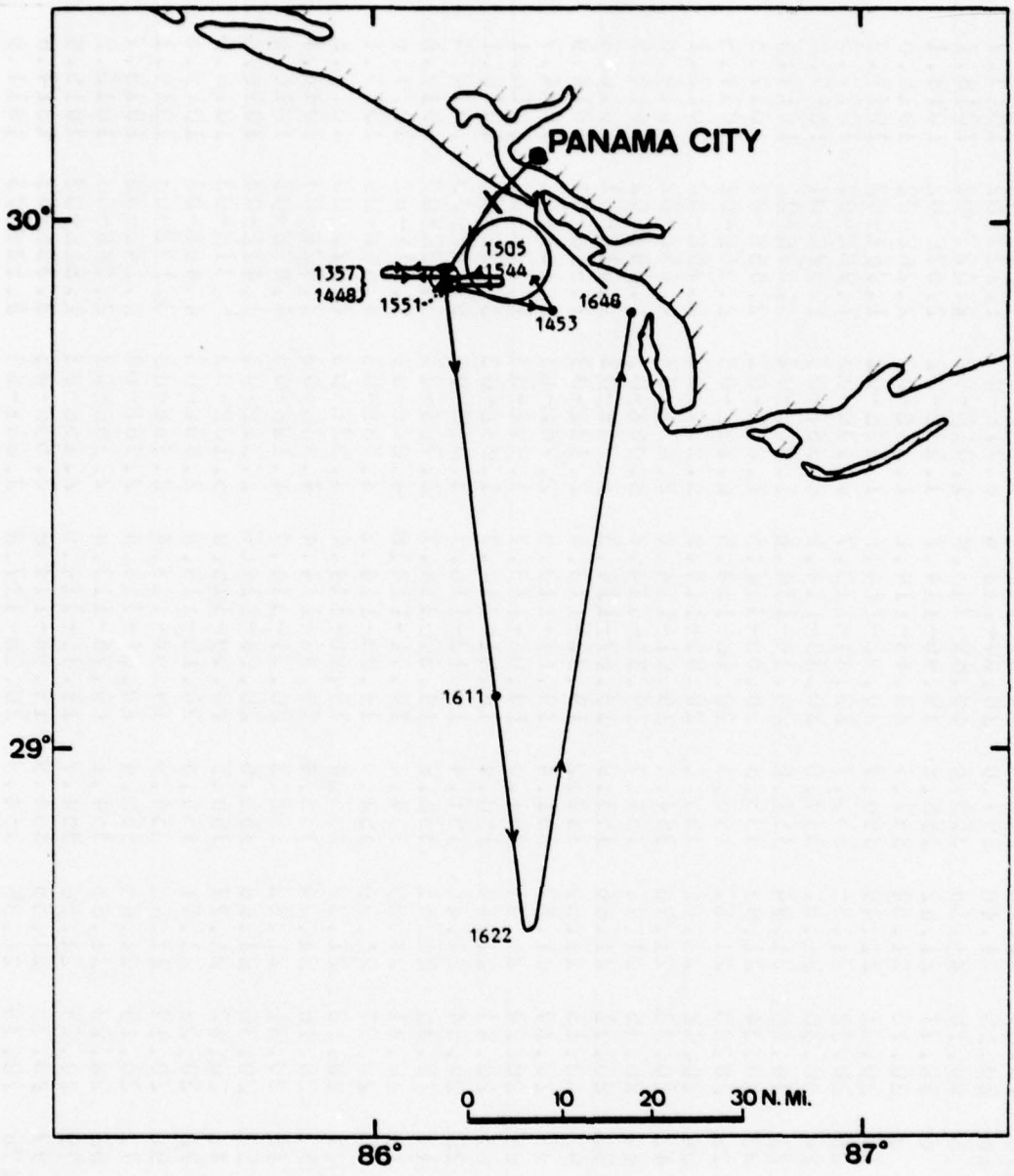
Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 32 9	11258	9.84	22.05	189.7	1.31	-2.0	1.51E-05	3.44E-03	669.8
14 32 41	10907	10.16	21.48	192.5	1.42	-5.3	1.54E 00	3.13E-03	678.8
14 33 13	10437	10.14	16.41	178.3	-2.35	-8.8	1.18E 01	1.20E-02	691.0
14 33 45	10323	11.33	21.75	199.1	2.14	-8.6	2.23E 00	1.13E-02	693.9
14 34 17	10009	11.98	21.81	200.8	2.12	8.8	5.73E-05	4.77E-04	702.2
14 34 49	9692	12.57	20.53	201.3	1.83	12.3	9.63E-05	2.17E-03	710.7
14 35 21	9476	12.99	21.97	202.4	1.78	12.5	4.82E-05	2.47E-03	716.4
14 35 53	9064	13.98	21.92	204.5	1.74	12.7	9.10E-06	2.71E-04	727.6
14 36 25	8770	14.24	21.89	206.9	1.83	14.5	8.37E-06	3.61E-05	735.7
14 36 57	8450	13.85	21.40	210.3	2.00	16.3	8.04E-06	9.62E-05	744.5
14 37 29	8347	13.25	21.33	212.6	2.24	16.1	4.54E-05	1.88E-04	747.3
14 38 1	8334	13.12	16.62	214.0	2.49	16.5	3.22E-05	1.65E-04	747.7
14 38 33	8203	13.31	16.70	215.2	2.57	17.3	1.30E-05	1.69E-04	751.4
14 39 5	8029	13.72	21.21	209.1	1.01	18.8	1.80E-01	1.54E-03	756.2
14 39 37	7878	14.10	21.49	218.0	2.79	17.3	2.19E-05	7.26E-04	760.5
14 40 9	7705	14.16	20.18	221.6	3.29	16.5	7.66E-01	1.56E-03	765.4
14 40 41	7566	14.57	22.31	223.1	3.48	18.5	1.01E-05	8.21E-05	769.4
14 41 12	7363	14.58	21.35	225.8	3.73	19.8	7.43E-06	2.89E-05	775.2
14 41 44	7170	15.20	22.25	226.5	3.67	20.3	7.30E-06	4.12E-05	780.7
14 42 16	6966	14.49	22.21	235.0	5.05	23.9	1.24E-05	8.11E-05	786.6
14 42 48	6878	14.18	19.11	211.0	-0.46	24.8	5.45E 00	9.86E-03	789.2
14 43 20	7078	15.70	21.89	224.7	3.20	26.4	9.51E-06	5.67E-04	783.4
14 43 52	7242	15.24	21.93	224.3	3.31	28.1	1.21E-05	2.75E-05	778.7
14 44 24	7299	15.12	22.06	224.7	3.47	25.9	1.19E-05	2.00E-05	777.0
14 44 56	7326	15.05	22.16	224.8	3.53	26.4	8.60E-06	1.64E-05	776.2
14 45 28	7355	14.63	22.21	225.1	3.58	23.2	8.91E-06	1.23E-05	775.4
14 46 0	7443	14.65	22.10	224.8	3.65	21.7	1.08E-05	1.95E-05	772.9
14 46 32	7450	14.72	21.99	225.8	3.91	22.1	1.10E-05	2.50E-05	772.7
14 47 4	7362	15.19	22.13	225.8	3.83	22.7	1.00E-05	9.53E-06	775.2
14 47 36	7203	14.49	21.81	229.1	4.16	23.1	1.08E-05	1.88E-05	779.8
14 48 8	7122	14.65	22.37	230.7	4.41	25.7	1.06E-05	1.76E-05	782.1
14 48 40	7182	14.89	22.51	229.2	4.23	29.2	1.15E-05	1.86E-05	780.4
14 49 12	7259	15.30	22.76	225.6	3.64	26.8	1.15E-05	1.88E-05	778.1
14 49 44	7341	15.25	22.80	224.2	3.45	26.3	1.28E-05	1.85E-05	775.8
14 50 16	7371	15.00	22.67	224.3	3.48	26.9	1.19E-05	2.38E-05	774.9
14 50 48	7374	15.09	22.58	223.9	3.42	23.1	1.19E-05	2.57E-05	774.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 51 20	7243	15.52	22.61	225.9	3.72	25.8	1.16E-05	4.33E-05	778.6
14 51 51	7206	15.68	22.59	225.1	3.51	26.7	1.08E-05	3.23E-05	779.7
14 52 23	7197	15.22	22.34	227.0	3.82	26.9	1.06E-05	2.43E-05	779.9
14 52 55	7222	15.47	22.47	225.9	3.68	29.4	1.14E-05	4.34E-05	779.2
14 53 27	7178	15.47	22.45	226.9	3.82	31.3	1.18E-05	2.14E-05	780.5
14 53 59	7219	15.69	22.47	224.8	3.46	31.0	1.52E-05	5.01E-05	779.3
14 54 31	7310	15.56	22.40	223.9	3.40	31.3	1.29E-05	3.29E-05	776.7
14 55 3	7335	15.35	22.46	224.1	3.43	33.5	1.26E-05	4.04E-05	776.0
14 55 35	7332	15.44	21.86	207.3	-0.30	33.9	1.51E 00	2.45E-04	776.1
14 56 7	7310	15.10	8.76	158.6	-11.23	31.9	1.72E 01	1.83E-02	776.7
14 56 39	7412	15.44	22.41	223.5	3.46	35.8	1.23E-03	3.28E-03	773.8
14 57 11	7193	15.17	20.15	193.5	-3.66	34.0	2.02E 00	1.31E-03	780.0
14 57 43	6924	15.01	14.42	145.3	-14.88	31.1	8.61E 00	8.93E-03	787.8
14 58 15	6737	15.45	22.47	237.1	5.33	35.2	1.71E-02	5.76E-03	793.3
14 58 47	6301	15.12	22.78	251.2	7.64	43.9	1.14E-05	1.93E-04	806.1
14 59 19	5861	14.99	22.80	262.9	9.42	53.9	1.78E-05	2.26E-04	819.2
14 59 51	5527	14.62	22.82	272.0	10.75	67.0	2.08E-05	2.83E-04	829.3
15 0 23	5517	14.61	22.67	271.5	10.63	70.4	1.77E-05	3.00E-04	829.6
15 0 55	5598	14.63	22.56	269.9	10.41	62.9	2.65E-05	5.36E-04	827.1
15 1 27	5588	14.76	22.62	271.3	10.74	61.5	3.38E-05	3.10E-04	827.4
15 1 59	5491	14.86	22.78	273.4	11.06	60.5	2.96E-05	1.36E-04	830.4
15 2 30	5062	15.00	22.85	286.8	13.30	97.9	2.07E-05	5.37E-04	843.5
15 3 2	4696	15.75	23.05	284.6	12.32	101.6	3.44E-04	1.12E-03	854.8
15 3 34	4199	17.04	23.31	288.7	12.65	100.8	1.09E-06	9.66E-05	870.3
15 4 6	3699	17.94	23.60	291.7	12.61	115.3	1.15E-05	5.02E-04	886.2
15 4 38	3488	17.75	23.49	295.1	12.93	103.0	2.70E-05	2.09E-03	893.0
15 5 10	3432	17.83	23.32	300.2	13.98	110.2	1.26E-03	2.07E-03	894.8
15 5 42	3489	17.53	23.16	296.9	13.28	114.9	1.31E-03	6.57E-03	892.9
15 6 14	3229	18.33	23.70	302.3	14.22	127.0	3.58E-03	8.43E-03	901.3
15 6 46	2849	18.69	24.08	317.5	17.03	186.4	1.87E-03	9.58E-03	913.7
15 7 18	2762	19.01	24.21	311.5	15.59	157.9	1.28E-03	4.86E-03	916.6
15 7 50	2681	18.86	23.92	324.6	18.37	168.6	2.30E-03	3.94E-03	919.2
15 8 22	2647	19.06	24.00	317.8	16.82	191.9	5.93E-04	3.30E-03	920.3
15 8 54	2392	19.66	24.19	327.1	18.62	218.5	1.15E-03	3.36E-03	928.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 9 26	2072	20.54	23.97	329.9	18.89	236.8	4.63E-04	5.34E-04	939.4
15 9 58	1849	21.08	23.79	328.8	18.36	255.2	5.08E-04	4.68E-04	947.0
15 10 30	1573	21.93	23.85	332.5	18.93	255.1	5.34E-04	5.69E-04	956.3
15 11 2	1589	21.63	23.86	334.1	19.24	241.5	7.68E-04	2.12E-04	955.8
15 11 34	1591	21.58	23.78	333.6	19.10	222.5	6.93E-04	2.99E-04	955.7
15 12 6	1635	21.35	23.68	335.1	19.47	234.4	7.03E-04	5.07E-04	954.2
15 12 38	1404	22.27	23.55	335.5	19.39	238.0	5.06E-04	1.55E-04	962.1
15 13 9	1132	23.18	23.60	336.2	19.29	262.7	6.83E-04	2.74E-04	971.4
15 13 41	1059	23.27	23.59	335.9	19.08	249.8	3.19E-04	2.64E-04	973.9
15 14 13	1072	23.04	23.40	338.2	19.57	281.9	6.99E-04	4.57E-04	973.5
15 14 45	1126	22.80	23.24	337.4	19.43	273.6	4.86E-04	1.33E-04	971.6
15 15 17	1106	22.85	23.25	337.8	19.50	281.2	6.38E-04	2.71E-04	972.3
15 15 49	911	23.63	23.41	338.8	19.57	273.0	7.27E-04	2.73E-04	979.0
15 16 21	881	23.64	23.44	339.5	19.68	302.9	6.81E-04	3.07E-04	980.1
15 16 53	881	23.50	23.28	340.5	19.86	292.8	5.11E-04	1.77E-04	980.1
15 17 25	889	23.48	23.26	339.5	19.64	280.4	7.13E-04	1.66E-04	979.8
15 17 57	689	24.32	23.27	340.9	19.82	307.3	6.35E-04	5.55E-04	986.7
15 18 29	551	24.67	23.34	343.2	20.19	299.3	6.42E-04	2.21E-04	991.6
15 19 1	584	24.45	23.18	343.1	20.16	330.3	1.02E-03	4.70E-04	990.4
15 19 33	630	24.26	22.99	343.7	20.34	316.7	1.09E-03	7.14E-04	988.8
15 20 5	421	25.08	23.19	347.0	20.94	355.8	3.27E-03	1.23E-03	996.1
15 20 37	211	25.56	23.47	349.5	21.26	380.7	8.49E-03	5.30E-03	1003.5
15 21 8	450	24.84	23.31	344.8	20.41	346.8	1.23E-03	5.63E-04	995.1
15 21 40	419	24.97	23.23	343.5	20.09	333.6	4.94E-04	9.01E-04	996.2
15 22 12	432	24.90	23.19	345.9	20.66	362.3	7.91E-04	7.30E-04	995.7
15 22 44	432	24.84	23.21	345.9	20.64	333.3	1.36E-03	4.52E-04	995.7
15 23 16	334	25.20	23.22	346.8	20.77	335.1	1.43E-03	5.91E-04	999.2
15 23 48	322	25.23	23.26	346.5	20.66	357.9	1.10E-03	7.42E-04	999.6
15 24 20	347	25.07	23.25	348.6	21.17	355.2	2.20E-03	1.08E-03	998.7
15 24 52	287	25.38	23.23	347.9	20.97	383.2	2.62E-03	1.50E-03	1000.8
15 25 24	224	25.59	23.27	346.9	20.68	345.8	2.17E-03	2.09E-03	1003.1
15 25 56	231	25.45	23.13	349.1	21.16	436.3	3.66E-03	1.93E-03	1002.8
15 26 28	210	25.54	23.10	348.6	21.05	353.6	3.40E-03	2.14E-03	1003.3
15 27 0	213	25.47	23.07	349.5	21.24	401.3	3.17E-03	1.79E-03	1003.4
15 27 32	172	25.68	23.11	352.8	22.01	438.6	1.40E-02	4.52E-03	1004.9
15 28 4	172	25.58	23.11	351.8	21.74	434.6	8.27E-03	6.21E-03	1004.9
15 28 36	187	25.49	23.02	351.5	21.67	371.2	4.64E-03	3.16E-03	1004.4

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 29 7	184	25.44	23.05	352.3	21.83	411.8	7.23E-03	2.87E-03	1004.5
15 29 39	184	25.35	23.06	352.9	21.95	378.6	3.41E-03	2.98E-03	1004.5
15 30 11	180	25.36	23.09	353.5	22.08	362.1	5.00E-03	2.82E-03	1004.6
15 30 43	163	25.41	23.09	353.4	22.04	333.0	6.31E-03	5.11E-03	1005.2
15 31 15	163	25.39	23.03	354.9	22.40	404.5	6.86E-03	3.11E-03	1005.2
15 31 47	163	25.35	22.93	353.1	21.95	354.9	5.01E-03	3.12E-03	1005.2
15 32 19	157	25.36	22.94	352.3	21.75	322.1	6.37E-03	4.00E-03	1005.4
15 32 51	146	25.46	22.93	353.7	22.08	399.8	1.01E-02	5.82E-03	1005.8
15 33 23	149	25.39	22.90	352.0	21.67	423.2	6.48E-03	4.96E-03	1005.7
15 33 55	142	25.39	22.94	354.6	22.27	397.3	1.03E-02	6.22E-03	1005.9
15 34 26	136	25.39	23.02	354.4	22.20	370.0	9.13E-03	6.96E-03	1006.2
15 34 58	129	25.47	23.14	355.4	22.46	414.4	1.52E-02	9.78E-03	1006.4
15 35 30	117	25.46	23.27	356.2	22.62	360.9	2.15E-02	1.41E-02	1006.8
15 36 2	116	25.53	23.18	354.2	22.16	384.7	2.42E-02	1.35E-02	1006.9
15 36 34	113	25.52	23.22	355.8	22.53	458.9	1.97E-02	1.19E-02	1007.0
15 37 6	123	25.43	23.18	354.8	22.29	419.8	2.04E-02	1.47E-02	1006.6
15 37 38	203	25.15	23.12	349.9	21.19	399.2	4.05E-03	4.01E-03	1003.8
15 38 10	218	25.30	23.35	348.1	20.86	322.5	1.77E-03	2.74E-03	1003.3
15 38 42	222	25.28	23.28	346.9	20.58	360.4	1.44E-03	2.04E-03	1003.1
15 39 14	219	25.33	23.24	353.3	22.11	445.5	2.93E-03	3.59E-03	1003.2
15 39 46	191	25.57	23.26	353.1	22.07	389.5	3.06E-03	2.02E-03	1004.2
15 40 18	203	26.06	23.23	350.3	21.61	348.9	1.93E-03	2.38E-03	1003.8
15 40 50	209	26.21	23.25	351.0	21.84	393.6	1.86E-03	2.14E-03	1003.6
15 41 22	210	26.18	23.34	350.7	21.77	392.2	2.30E-03	2.49E-03	1003.6
15 41 54	222	25.63	23.35	350.1	21.44	381.4	2.14E-03	2.44E-03	1003.1
15 42 25	216	25.44	23.32	349.8	21.31	380.6	3.66E-03	2.63E-03	1003.3
15 42 57	245	25.22	23.18	352.7	21.97	404.8	3.48E-03	3.08E-03	1002.3
15 43 29	309	24.88	23.08	352.1	21.85	361.8	1.27E-03	1.59E-03	1000.1
15 44 1	296	24.97	23.06	352.2	21.89	374.2	1.56E-03	1.98E-03	1000.5
15 44 33	272	24.97	23.13	349.6	21.22	347.4	1.26E-03	8.18E-04	1001.4
15 45 5	290	24.90	23.14	352.2	21.84	390.9	2.44E-03	3.01E-03	1000.7
15 45 37	483	24.13	23.11	349.9	21.45	353.4	7.98E-04	9.21E-04	993.9
15 46 9	537	24.12	23.19	347.8	21.07	329.5	9.64E-04	5.77E-04	992.0
15 46 41	511	24.38	23.36	349.7	21.56	339.4	1.14E-03	1.26E-03	993.0
15 47 13	520	24.34	23.42	346.6	20.82	303.5	9.25E-04	6.44E-04	992.6
15 47 45	1010	22.74	23.31	341.7	20.16	272.7	4.09E-04	1.60E-03	975.6
15 48 17	1457	21.54	22.89	337.3	19.69	252.1	5.40E-04	2.04E-03	960.2
15 48 49	1861	20.14	22.51	342.6	21.26	223.5	1.61E-03	2.63E-03	946.5
15 49 21	2286	18.98	22.08	335.8	20.18	209.4	1.59E-03	3.05E-03	932.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 49 53	2717	17.99	21.15	323.3	17.87	200.5	2.46E-03	3.86E-03	918.0
15 50 24	3180	18.04	20.82	297.2	12.88	106.4	1.05E-03	9.76E-04	902.9
15 50 56	3574	17.60	20.75	299.6	14.06	92.3	1.22E-04	8.65E-04	890.2
15 51 28	3619	17.41	20.85	295.5	13.16	92.5	1.29E-04	6.95E-04	888.7
15 52 0	3184	18.00	21.20	301.4	13.82	115.1	2.98E-04	4.98E-04	902.8
15 52 32	2742	18.38	21.68	321.1	17.56	175.9	2.22E-04	6.92E-04	917.2
15 53 4	2218	19.30	21.90	332.8	19.47	232.9	3.37E-04	7.77E-04	934.6
15 53 36	1695	20.65	21.86	338.8	20.22	237.6	1.65E-04	3.31E-04	952.2
15 54 8	1050	22.58	21.93	341.9	20.24	237.2	2.67E-04	1.18E-04	974.2
15 54 40	447	24.18	22.00	348.1	20.96	268.5	7.50E-04	2.80E-04	995.2
15 55 12	114	24.59	22.04	354.3	21.85	370.7	6.88E-03	2.35E-03	1006.9
15 55 44	86	24.29	21.97	356.1	22.10	421.7	1.08E-02	3.63E-03	1007.9
15 56 16	79	24.21	21.85	356.1	22.05	387.6	1.24E-02	4.02E-03	1008.2
15 56 48	78	24.17	21.98	355.5	21.91	385.7	1.36E-02	4.66E-03	1008.2
15 57 20	88	24.23	21.73	356.2	22.10	383.4	7.66E-03	5.41E-03	1007.9
15 57 52	89	24.22	21.55	355.1	21.86	392.1	7.61E-03	3.80E-03	1007.8
15 58 24	91	24.24	21.47	355.1	21.86	365.4	9.50E-03	2.64E-03	1007.8
15 58 56	87	24.20	21.48	355.7	21.98	376.0	9.38E-03	3.68E-03	1007.9
15 59 28	99	24.13	21.48	355.3	21.89	353.7	7.84E-03	2.65E-03	1007.5
16 0 0	115	24.06	21.44	355.9	22.03	363.6	4.93E-03	2.12E-03	1006.9
16 0 32	111	24.05	21.38	356.1	22.07	398.6	4.78E-03	2.49E-03	1007.1
16 1 3	106	24.00	21.35	355.6	21.93	371.6	7.12E-03	2.47E-03	1007.2
16 1 35	110	24.01	21.34	354.3	21.63	359.9	7.89E-03	2.88E-03	1007.1
16 2 7	120	23.95	21.32	355.3	21.86	394.9	5.94E-03	2.19E-03	1006.7
16 2 39	143	23.87	21.27	353.2	21.40	343.4	4.41E-03	1.68E-03	1005.9
16 3 11	153	23.82	21.26	353.1	21.37	324.4	6.11E-03	2.09E-03	1005.6
16 3 43	145	23.83	21.34	355.5	21.93	393.6	4.44E-03	2.20E-03	1005.9
16 4 15	145	23.74	21.32	354.9	21.77	567.7	3.40E-03	1.59E-03	1005.8
16 4 47	179	23.50	21.27	353.4	21.40	564.4	3.76E-03	1.57E-03	1004.7
16 5 19	168	23.40	21.23	352.1	21.02	513.3	3.92E-03	1.67E-03	1005.0
16 5 51	182	23.35	21.22	350.9	20.76	482.9	2.92E-03	1.53E-03	1004.5
16 6 23	152	23.44	21.23	352.1	21.00	462.0	8.20E-03	3.41E-03	1005.6
16 6 55	121	23.48	21.22	354.0	21.40	428.7	6.58E-03	3.53E-03	1006.7
16 7 27	224	23.45	21.07	353.3	21.45	148.3	6.04E-03	1.98E-03	1003.1
16 7 59	181	23.52	21.11	353.6	21.45	228.1	1.56E-02	4.84E-03	1004.6
16 8 31	160	23.38	20.99	352.2	21.01	450.9	1.78E-02	6.45E-03	1005.3



NOTE: Numbers give time in Central Standard Time

Figure B-2. Flight 2 Flight Track

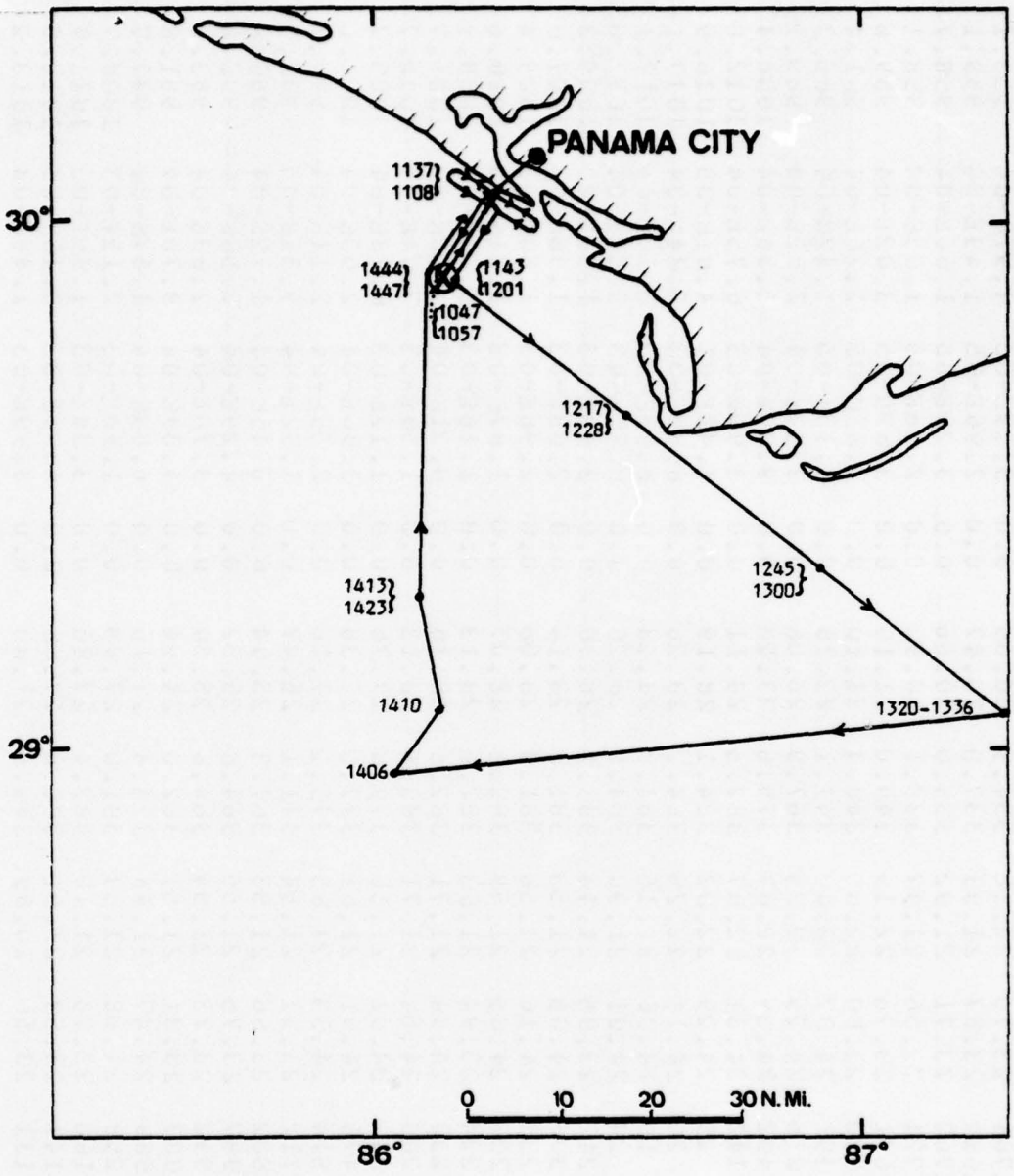
FLIGHT# 2 2DEC78

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 5 5	267	19.43	21.51	353.6	19.78	-109.4	7.97E-04	2.42E-04	1008.7
14 5 37	110	19.85	21.32	356.4	20.23	-112.0	2.35E-03	1.55E-03	1014.3
14 6 9	16	20.15	21.40	357.0	20.24	-113.6	8.71E-03	1.12E-02	1017.7
14 6 41	5	20.16	21.58	355.6	19.89	-113.8	1.01E-02	2.02E-02	1018.1
14 7 13	6	20.21	21.62	355.8	19.96	-114.7	1.21E-02	2.07E-02	1018.1
14 7 45	8	20.23	21.54	357.7	20.43	-114.6	1.35E-02	2.26E-02	1018.0
14 8 17	16	20.21	21.49	356.7	20.22	-114.1	1.13E-02	1.96E-02	1017.7
14 8 49	26	20.32	21.55	355.7	20.04	-113.7	9.97E-03	7.96E-02	1017.3
14 9 21	24	20.30	21.81	357.0	20.33	-114.1	8.38E-03	1.32E-01	1017.4
14 9 53	21	20.36	21.94	357.0	20.34	-114.6	1.39E-02	3.07E-02	1017.5
14 10 25	23	20.34	21.93	355.8	20.05	-114.5	1.00E-02	2.65E-02	1017.5
14 10 57	22	20.33	21.82	356.3	20.18	-114.5	6.25E-03	2.25E-02	1017.5
14 11 29	34	20.42	21.81	355.6	20.06	-114.9	5.22E-03	1.35E-02	1017.1
14 12 1	42	20.33	21.78	354.6	19.81	-114.6	2.42E-03	1.65E-02	1016.8
14 12 33	44	20.35	21.71	354.7	19.85	-114.7	3.06E-03	1.69E-02	1016.7
14 13 5	52	20.31	21.66	353.9	19.67	-114.3	3.24E-03	1.01E-01	1016.4
14 13 37	93	20.15	21.59	352.2	19.32	-113.4	2.18E-03	1.51E-01	1014.9
14 14 9	99	20.17	21.57	351.4	19.14	-113.5	2.78E-03	2.15E-02	1014.7
14 14 41	88	20.24	21.41	351.0	19.06	-113.7	1.99E-03	1.27E-02	1015.1
14 15 13	61	20.41	21.44	350.4	18.91	-114.7	1.98E-03	3.15E-03	1016.1
14 15 45	25	20.54	21.46	351.4	19.12	-115.3	3.55E-03	5.26E-03	1017.4
14 16 17	19	20.36	21.41	352.8	19.37	-114.7	2.70E-03	5.00E-03	1017.6
14 16 49	19	20.31	21.29	354.4	19.71	-114.6	4.24E-03	1.11E-02	1017.6
14 17 21	30	20.21	21.26	354.9	19.83	-114.3	3.78E-03	4.86E-03	1017.2
14 17 53	42	20.18	21.32	355.4	19.96	-114.4	3.52E-03	4.92E-03	1016.8
14 18 24	53	20.16	21.24	355.4	19.97	-114.4	4.93E-03	3.92E-03	1016.4
14 18 56	48	20.31	21.52	356.3	20.21	-114.7	4.12E-03	4.87E-03	1016.6
14 19 28	52	20.30	21.66	355.6	20.06	-114.6	2.36E-03	3.41E-03	1016.4
14 20 0	46	20.42	21.77	356.5	20.29	-115.0	5.10E-03	5.31E-03	1016.6
14 20 32	76	20.26	21.71	355.8	20.16	-113.8	2.90E-03	4.40E-03	1015.6
14 21 4	90	20.17	21.68	354.9	19.94	-113.4	2.36E-03	3.17E-03	1015.1
14 21 36	72	20.15	21.65	355.4	20.01	-113.4	2.78E-03	2.14E-03	1015.7
14 22 8	86	20.20	21.65	354.1	19.76	-113.8	2.15E-03	2.28E-03	1015.2
14 22 40	79	20.25	21.58	354.7	19.89	-114.0	2.15E-03	1.81E-03	1015.4
14 23 12	97	20.25	21.59	354.9	19.98	-114.8	2.53E-03	3.35E-03	1014.8
14 23 44	170	20.39	21.35	354.9	20.20	-117.8	2.66E-03	2.52E-03	1011.9

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 24 16	171	20.33	21.26	354.1	19.99	-117.6	2.83E-03	2.44E-03	1012.1
14 24 48	97	20.32	21.21	352.9	19.55	-115.3	3.19E-03	3.07E-03	1014.8
14 25 20	129	20.12	21.28	351.7	19.27	-113.5	6.84E-04	9.05E-04	1013.6
14 25 52	123	20.23	21.31	352.3	19.43	-114.1	2.02E-03	1.21E-03	1013.9
14 26 24	120	20.32	21.34	351.5	19.26	-114.6	1.71E-03	1.01E-03	1014.0
14 26 56	126	20.37	21.26	351.5	19.30	-114.9	1.33E-03	1.24E-03	1013.7
14 27 28	163	20.44	21.22	350.9	19.27	-115.0	1.36E-03	7.04E-04	1012.4
14 28 0	247	20.20	21.19	349.8	19.11	-113.7	1.06E-03	5.27E-04	1009.4
14 28 32	292	19.84	21.26	350.0	19.14	-111.7	1.66E-03	7.37E-04	1007.8
14 29 4	278	19.82	21.25	350.7	19.26	-111.6	1.54E-03	7.43E-04	1008.3
14 29 36	283	19.71	21.26	350.9	19.28	-111.0	1.55E-03	5.03E-04	1008.1
14 30 8	275	19.73	21.30	351.6	19.43	-111.0	1.94E-03	6.45E-04	1008.4
14 30 40	377	19.43	21.27	352.0	19.63	-109.9	1.16E-03	2.96E-04	1004.7
14 31 12	493	19.05	21.25	351.6	19.67	-107.6	1.46E-03	3.05E-04	1000.6
14 31 44	483	19.14	21.43	352.0	19.77	-107.9	1.11E-03	2.19E-04	1001.0
14 32 16	484	18.98	21.48	352.2	19.77	-107.0	1.01E-03	1.41E-04	1000.9
14 32 48	472	19.07	21.54	352.4	19.82	-107.4	1.63E-03	3.08E-04	1001.3
14 33 20	548	19.04	21.38	353.0	20.11	-107.1	1.32E-03	3.54E-04	998.6
14 33 52	739	18.74	21.20	349.7	19.67	-105.4	1.96E-03	1.80E-03	991.8
14 34 24	750	19.02	21.36	348.6	19.54	-107.0	1.86E-03	2.76E-03	991.4
14 34 56	741	19.30	21.51	348.7	19.63	-108.4	2.33E-03	5.43E-03	991.8
14 35 28	755	19.10	21.46	348.1	19.46	-107.3	1.53E-03	5.58E-03	991.3
14 36 0	782	19.04	21.42	348.1	19.49	-107.0	1.83E-03	4.98E-03	990.3
14 36 32	964	20.09	21.17	348.8	20.41	-113.4	6.56E-05	2.33E-03	983.9
14 37 3	986	20.11	21.16	346.7	19.97	-113.1	5.32E-05	1.10E-03	983.1
14 37 35	1045	20.33	21.10	342.8	19.27	-114.3	2.42E-05	1.24E-04	981.0
14 38 7	995	20.54	21.16	342.8	19.23	-115.3	6.64E-05	7.70E-04	982.8
14 38 39	1005	20.21	21.19	345.1	19.69	-113.5	1.51E-04	1.53E-03	982.5
14 39 11	1089	20.08	21.07	343.7	19.50	-112.7	8.37E-05	1.25E-03	979.5
14 39 43	1360	20.00	20.80	346.2	20.63	-112.1	4.98E-05	2.27E-04	970.0
14 40 15	1526	20.19	20.73	345.5	20.87	-113.3	2.86E-05	1.33E-04	964.3
14 40 47	1497	20.38	20.91	345.4	20.86	-114.3	2.22E-05	9.89E-05	965.3
14 41 19	1444	20.40	21.08	345.7	20.83	-114.5	3.21E-05	1.36E-04	967.1
14 41 51	1461	19.78	21.09	345.6	20.62	-111.2	2.96E-05	9.19E-05	966.5
14 42 23	1476	19.30	21.18	346.0	20.57	-108.5	4.50E-05	7.81E-05	966.0
14 42 55	1637	19.20	21.10	346.2	20.92	-107.6	4.66E-05	7.34E-05	960.4

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 43 27	1896	19.43	20.95	344.1	21.07	-108.2	3.52E-05	4.93E-04	951.5
14 43 59	1985	19.31	20.82	344.0	21.20	-107.8	2.05E-05	1.11E-04	948.5
14 44 31	2112	19.42	20.72	343.4	21.36	-112.5	2.14E-05	1.23E-04	944.2
14 45 3	2150	19.29	20.75	342.9	21.28	-112.4	2.63E-05	1.82E-04	942.9
14 45 35	2093	19.20	20.80	342.6	21.05	-110.8	2.40E-05	8.60E-05	944.8
14 46 7	1999	19.19	21.02	342.4	20.81	-107.7	3.29E-05	9.83E-05	948.0
14 46 39	2066	19.14	21.02	341.6	20.75	-107.4	3.94E-05	1.12E-04	945.7
14 47 11	2329	18.85	20.75	338.9	20.57	-105.7	2.44E-04	3.82E-04	936.8
14 47 43	2539	18.61	20.52	335.9	20.25	-104.9	6.27E-05	8.90E-04	929.7
14 48 15	2521	18.69	20.64	336.2	20.29	-105.1	4.53E-05	1.96E-03	930.3
14 48 47	2519	18.57	20.75	336.3	20.28	-104.1	5.81E-05	2.63E-03	930.4
14 49 19	2534	18.66	20.70	335.2	20.09	-104.6	6.22E-05	2.12E-03	929.9
14 49 51	2560	18.72	20.65	334.1	19.92	-105.0	5.73E-05	1.71E-03	929.0
14 50 23	2786	18.39	20.29	330.9	19.53	-103.2	2.07E-03	2.93E-03	921.4
14 50 55	2998	18.06	20.05	329.5	19.54	-101.7	1.36E-03	3.19E-03	914.4
14 51 27	3039	17.96	20.12	328.2	19.29	-101.2	1.14E-03	3.10E-03	913.0
14 51 59	2978	18.14	20.36	328.9	19.38	-101.8	1.09E-03	2.98E-03	915.1
14 52 31	2968	18.10	20.29	328.4	19.23	-101.6	1.28E-03	2.09E-03	915.4
14 53 3	3045	18.16	20.14	326.7	19.02	-101.9	4.37E-05	1.87E-03	912.8
14 53 35	2982	18.44	20.26	326.7	19.00	-103.2	3.48E-05	1.80E-03	914.9
14 54 7	3089	18.05	20.13	327.0	19.15	-100.8	6.05E-05	2.61E-03	911.4
14 54 39	3463	17.56	19.93	323.2	18.87	-98.2	1.11E-04	3.58E-03	899.1
14 55 11	3798	17.14	19.69	320.1	18.70	-96.1	2.65E-04	4.74E-03	888.1
14 55 43	4180	16.68	18.76	313.4	17.78	-94.1	5.98E-03	8.56E-03	875.8
14 56 15	4536	15.92	16.78	309.5	17.37	-89.7	3.46E-04	5.78E-03	864.5
14 56 47	4821	15.20	14.84	306.9	17.09	-84.7	4.17E-02	6.77E-03	855.5
14 57 19	5012	14.73	14.04	303.9	16.65	-181.1	5.28E 00	5.91E-02	849.5
14 57 51	5070	14.70	16.70	303.7	16.71	-115.8	1.12E 00	9.56E-02	847.7
14 58 22	5227	14.37	16.29	300.9	16.30	-81.3	1.96E-03	5.31E-03	842.8
14 58 54	5337	14.40	14.65	298.8	16.03	-81.2	2.04E-04	3.50E-03	839.4
14 59 26	5317	14.98	14.79	297.1	15.78	-84.0	1.22E-03	9.13E-03	840.0
14 59 58	5614	14.22	15.42	293.8	15.38	-80.1	1.26E-03	6.63E-03	830.9
15 0 30	5964	13.54	15.68	288.7	14.71	-77.0	1.38E-03	5.61E-03	820.2
15 1 2	6121	13.23	15.71	287.3	14.60	-73.7	3.96E-03	2.47E-02	815.4
15 1 34	6226	13.08	14.23	285.2	14.28	-128.6	2.14E 00	4.75E-02	812.3
15 2 6	6288	13.42	16.16	282.3	13.86	-107.5	5.03E 00	1.02E-01	810.4
15 2 38	6283	13.80	15.37	280.4	13.53	-77.3	3.29E-03	3.03E-02	810.6

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 3 10	6623	12.84	15.77	276.8	13.08	-73.2	2.18E-03	1.15E-02	800.4
15 3 42	6974	11.95	14.00	273.4	12.74	-69.5	1.75E-03	1.07E-02	790.0
15 4 14	7099	11.74	13.17	272.1	12.61	-66.6	1.07E-03	6.74E-03	786.3
15 4 46	7173	11.40	16.11	273.2	12.91	-65.2	6.75E-04	4.06E-03	784.1
15 5 18	7218	11.69	14.65	271.3	12.62	-66.4	1.58E-03	1.26E-02	782.8
15 5 50	7274	11.88	13.57	269.3	12.35	-66.9	2.57E-04	7.52E-03	781.2
15 6 22	7652	10.82	10.75	266.0	12.02	-62.6	1.83E-04	3.16E-03	770.2
15 6 54	7909	10.41	12.01	261.6	11.41	-60.0	2.40E-04	3.88E-03	762.8
15 7 26	8165	9.71	10.94	260.5	11.43	-56.3	5.59E-05	1.20E-03	755.5
15 7 58	8218	9.52	9.88	261.0	11.57	-54.9	7.81E-05	2.52E-03	754.0
15 8 30	8160	9.86	10.86	262.0	11.79	-56.5	1.14E-04	5.27E-03	755.7
15 9 1	8541	9.08	9.49	255.0	10.73	-52.2	1.14E-04	6.35E-03	744.9
15 9 33	8863	8.30	12.90	252.1	10.46	-46.7	1.32E-04	5.10E-03	735.9
15 10 5	9183	7.41	11.06	249.0	10.12	-42.1	2.13E-04	6.53E-03	727.0
15 10 37	9529	6.60	9.96	246.5	9.97	-37.4	1.45E-04	8.03E-03	717.5
15 11 9	9807	6.77	9.00	234.3	7.89	-38.8	2.67E-04	7.39E-03	710.0
15 11 41	10113	6.24	9.39	228.3	7.00	-37.8	2.10E-04	6.69E-03	701.8
15 12 13	10152	6.98	10.92	216.7	4.76	-41.1	2.56E-04	1.07E-02	700.7
15 12 45	10173	7.68	12.78	212.0	3.92	-44.5	2.01E-04	8.86E-03	700.2
15 13 17	10155	7.64	13.23	210.7	3.62	-44.1	1.94E-04	7.87E-03	700.7
15 13 49	10182	8.08	15.46	207.2	2.98	-46.3	7.69E-05	9.23E-03	699.9
15 14 21	10480	8.08	15.36	204.3	2.83	-46.4	9.57E-05	4.65E-03	692.0
15 14 53	10739	7.90	13.41	196.9	1.63	-90.9	1.75E 00	5.55E-02	685.2
15 15 25	11055	8.04	14.13	199.6	2.73	-46.2	6.66E-04	2.93E-02	676.9
15 15 57	11362	7.62	11.67	197.8	2.73	-42.7	1.03E-04	2.75E-03	669.0
15 16 29	11739	7.00	12.25	195.7	2.77	-39.0	7.97E-05	1.51E-03	659.3
15 17 1	12106	6.22	11.61	194.4	2.90	-37.0	6.83E-05	1.23E-03	650.0
15 17 33	12279	5.82	11.18	194.3	3.08	-40.2	4.30E-05	1.61E-03	645.7
15 18 5	12320	6.11	11.81	194.2	3.17	-45.1	1.71E-04	1.54E-03	644.7
15 18 37	12348	5.97	6.45	193.9	3.11	-42.8	1.55E-03	9.69E-03	644.0
15 19 9	12352	6.11	12.21	193.1	2.98	-41.1	2.66E-04	8.00E-03	643.9



NOTE: Numbers give time in Central Standard Time

Figure B-3. Flight 3 Flight Track

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FLIGHT# 3 3DEC78

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
10 49 27	1798	23.64	22.20	335.3	20.20	0.0	1.65E-04	1.87E-04	955.5
10 49 59	1781	23.70	22.18	334.9	20.08	0.0	3.29E-05	4.97E-04	956.1
10 50 31	1692	23.87	21.93	337.0	20.47	0.0	2.96E-05	1.49E-04	959.1
10 51 3	1702	23.71	21.92	338.0	20.66	0.0	3.28E-05	1.66E-04	958.7
10 51 35	1721	23.56	21.97	339.1	20.92	0.0	2.66E-05	1.63E-04	958.1
10 52 7	1671	23.76	22.19	340.0	21.10	0.0	2.69E-05	3.02E-04	959.8
10 52 39	1623	23.80	22.00	340.4	21.10	0.0	2.61E-05	2.26E-04	961.4
10 53 11	1391	24.07	22.03	347.1	22.28	0.0	3.13E-05	1.42E-04	969.3
10 53 43	815	24.29	22.25	367.9	26.06	0.0	2.37E-04	2.02E-04	989.2
10 54 15	492	24.39	22.07	375.6	27.23	0.0	9.80E-04	5.36E-04	1000.4
10 54 47	142	24.31	22.07	382.6	28.11	0.0	3.95E-03	6.75E-04	1012.8
10 55 19	25	24.29	22.03	384.1	28.19	0.0	1.42E-01	4.01E-03	1016.9
10 55 51	20	24.14	22.25	384.7	28.26	0.0	8.88E-03	8.34E-04	1017.1
10 56 23	19	24.06	22.15	384.9	28.28	0.0	8.63E-03	3.80E-04	1017.1
10 56 55	24	24.01	21.90	384.9	28.28	0.0	8.71E-03	5.59E-04	1017.0
10 57 27	242	23.95	21.44	383.1	28.30	0.0	2.99E-03	1.56E-03	1009.2
10 57 59	306	24.06	21.53	381.8	28.16	0.0	2.08E-03	1.90E-03	1007.0
10 58 31	237	24.16	21.58	381.9	28.08	0.0	2.96E-03	1.80E-03	1009.4
10 59 3	203	24.05	21.59	382.3	28.07	0.0	1.87E-03	1.31E-03	1010.6
10 59 35	224	23.94	21.63	382.6	28.13	0.0	1.46E-03	9.46E-04	1009.9
11 0 7	230	24.04	21.71	382.5	28.16	0.0	9.21E-04	1.16E-03	1009.7
11 0 39	200	24.04	21.71	382.6	28.13	0.0	1.50E-03	7.74E-04	1010.7
11 1 11	341	24.01	21.56	379.8	27.76	0.0	1.12E-03	6.78E-04	1005.7
11 1 43	476	24.01	21.61	377.0	27.38	0.0	3.96E-04	2.53E-04	1001.0
11 2 15	514	24.33	21.63	375.2	27.18	0.0	2.59E-04	2.11E-04	999.7
11 2 47	712	23.91	21.54	371.1	26.47	0.0	1.92E-04	9.31E-05	992.7
11 3 19	882	23.66	21.53	367.3	25.84	0.0	6.45E-04	1.72E-04	986.8
11 3 51	997	23.75	21.55	364.8	25.52	0.0	4.29E-04	2.56E-04	982.8
11 4 23	992	23.73	21.54	364.8	25.50	0.0	3.70E-04	2.63E-04	983.0
11 4 55	1027	23.81	21.51	362.0	24.94	0.0	4.89E-04	9.70E-04	981.8
11 5 26	569	24.47	21.48	374.4	27.16	0.0	6.83E-04	4.57E-04	997.7
11 5 58	258	24.08	21.33	381.0	27.89	0.0	1.98E-03	2.12E-03	1008.7
11 6 30	166	23.73	21.16	382.4	27.88	0.0	3.38E-03	1.99E-03	1011.9
11 7 2	141	23.58	21.01	382.8	27.86	0.0	4.59E-03	2.16E-03	1012.8
11 7 34	131	23.56	20.89	382.8	27.83	0.0	3.99E-03	1.46E-03	1013.2

Time h/m/s	Alt ft	T Point	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
11 8 6	97	23.60	20.83	383.1	27.83	0.0	7.56E-03	1.01E-03	1014.4
11 8 38	13	23.52	21.00	383.0	27.59	0.0	2.38E-02	2.11E-03	1017.3
11 9 10	9	23.53	21.16	382.7	27.53	0.0	2.33E-02	2.05E-03	1017.5
11 9 42	11	23.53	21.18	382.6	27.50	0.0	1.78E-02	1.85E-03	1017.4
11 10 14	10	23.54	21.26	382.5	27.49	0.0	2.08E-02	1.60E-03	1017.4
11 10 46	34	23.55	21.06	382.9	27.63	0.0	1.30E-02	1.33E-03	1016.6
11 11 18	26	23.50	21.06	382.8	27.58	0.0	1.14E-02	1.25E-03	1016.9
11 11 50	24	23.53	21.24	382.7	27.57	0.0	1.52E-02	1.54E-03	1016.9
11 12 22	18	23.46	21.13	383.0	27.58	0.0	1.66E-02	1.35E-03	1017.2
11 12 54	22	23.44	20.87	383.1	27.61	0.0	1.55E-02	1.88E-03	1017.0
11 13 26	26	23.56	20.85	382.9	27.63	0.0	1.49E-02	2.07E-03	1016.9
11 13 58	21	23.61	20.95	382.6	27.57	0.0	1.84E-02	2.22E-03	1017.1
11 14 30	14	23.75	21.02	382.4	27.55	0.0	2.55E-02	2.88E-03	1017.3
11 15 2	33	23.86	20.76	382.4	27.64	0.0	1.82E-02	3.28E-03	1016.6
11 15 34	53	23.89	20.66	381.8	27.55	0.0	1.12E-02	2.18E-03	1015.9
11 16 6	44	23.79	20.88	382.0	27.54	0.0	1.36E-02	2.26E-03	1016.2
11 16 38	42	23.68	20.98	382.5	27.62	0.0	1.26E-02	1.78E-03	1016.3
11 17 10	41	23.62	20.86	382.5	27.58	0.0	1.06E-02	2.06E-03	1016.3
11 17 42	60	23.62	20.93	382.8	27.69	0.0	9.97E-03	2.00E-03	1015.7
11 18 14	87	23.70	20.78	382.4	27.69	0.0	5.32E-03	1.40E-03	1014.7
11 18 45	68	23.63	20.70	382.3	27.60	0.0	7.39E-03	1.86E-03	1015.4
11 19 17	73	23.73	20.82	382.3	27.66	0.0	7.60E-03	2.90E-03	1015.2
11 19 49	73	23.81	20.82	382.0	27.62	0.0	8.85E-03	2.42E-03	1015.2
11 20 21	75	23.86	20.81	382.0	27.63	0.0	7.73E-03	2.21E-03	1015.1
11 20 53	129	23.89	20.68	381.9	27.75	0.0	3.63E-03	1.69E-03	1013.2
11 21 25	129	23.93	20.84	381.9	27.75	0.0	3.59E-03	1.65E-03	1013.2
11 21 57	119	23.94	20.87	381.9	27.73	0.0	5.34E-03	3.84E-03	1013.6
11 22 29	111	23.92	20.87	381.9	27.71	0.0	4.40E-03	5.44E-03	1013.8
11 23 1	166	23.74	20.85	382.4	27.88	0.0	6.72E-03	5.28E-03	1011.9
11 23 33	209	23.79	20.90	382.9	28.12	0.0	6.77E-03	5.09E-03	1010.4
11 24 5	186	23.81	20.92	382.9	28.08	0.0	6.63E-03	5.16E-03	1011.2
11 24 37	122	23.83	20.89	382.5	27.85	0.0	7.32E-03	5.12E-03	1013.5
11 25 9	248	23.79	20.94	381.7	27.92	0.0	2.89E-03	6.11E-03	1009.0
11 25 41	320	23.91	21.09	381.3	28.04	0.0	1.38E-03	5.46E-03	1006.5
11 26 13	307	24.04	20.91	381.2	28.02	0.0	1.36E-03	6.03E-03	1006.9
11 26 45	273	23.77	20.85	381.1	27.83	0.0	2.34E-03	5.70E-03	1008.1
11 27 17	267	23.78	20.76	381.3	27.87	0.0	1.74E-03	5.68E-03	1008.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
11 27 49	364	23.97	20.64	380.7	26.01	0.0	5.57E-04	6.20E-03	1004.9
11 28 21	582	23.83	20.53	377.0	27.55	0.0	2.13E-04	7.57E-03	997.3
11 28 53	607	23.84	20.44	376.2	27.43	0.0	8.42E-05	8.09E-03	996.4
11 29 25	610	23.90	20.49	375.2	27.22	0.0	9.66E-05	8.60E-03	996.3
11 29 57	625	5.29	20.49	375.5	20.39	0.0	8.70E-05	9.14E-03	995.8
11 30 29	706	0.59	20.51	372.0	18.20	0.0	9.51E-05	1.06E-02	992.9
11 31 1	923	9.00	20.63	367.0	20.51	0.0	5.89E-05	3.33E-03	985.4
11 31 33	1025	23.44	20.72	364.5	25.40	0.0	9.71E-05	3.82E-04	981.9
11 32 4	990	23.68	20.80	364.2	25.35	0.0	9.51E-05	3.34E-04	983.1
11 32 36	972	23.60	20.72	365.6	25.60	0.0	1.06E-04	2.25E-04	983.7
11 33 8	972	23.60	20.64	366.0	25.69	0.0	1.17E-04	3.07E-04	983.7
11 33 40	1071	23.50	20.63	362.6	25.07	0.0	1.30E-04	1.60E-04	980.3
11 34 12	1294	23.34	20.62	356.0	23.91	0.0	7.66E-05	1.64E-04	972.6
11 34 44	1338	23.68	20.34	313.7	14.16	0.0	9.36E-01	2.72E-02	971.1
11 35 16	1636	23.46	20.54	341.7	21.32	0.0	3.03E-03	1.75E-02	960.9
11 35 48	1561	23.65	20.72	342.6	21.44	0.0	2.38E-05	6.76E-04	963.5
11 36 20	1541	23.60	20.50	343.0	21.47	0.0	6.85E-01	1.78E-02	964.2
11 36 52	1303	23.74	18.69	223.8	-7.16	0.0	3.21E 00	1.36E-01	972.3
11 37 24	1428	23.69	20.65	344.0	21.58	0.0	2.40E-05	1.09E-03	966.6
11 37 56	1474	23.54	20.69	343.9	21.60	0.0	3.47E-05	2.01E-04	965.0
11 38 28	1729	23.43	20.76	335.7	20.18	0.0	4.01E-05	1.56E-04	956.4
11 39 0	1971	23.12	20.72	326.6	18.42	0.0	2.96E-05	7.33E-05	948.2
11 39 32	1953	23.21	20.82	328.3	18.83	0.0	2.85E-05	5.28E-05	948.8
11 40 4	2008	22.85	20.77	329.0	18.97	0.0	3.32E-05	1.66E-04	947.0
11 40 36	1966	22.80	20.41	329.9	19.09	0.0	2.98E-01	3.69E-03	948.4
11 41 8	1970	22.78	18.98	266.9	4.30	0.0	4.70E-01	1.29E-02	948.3
11 41 40	2266	22.70	20.70	319.8	17.30	0.0	4.49E-05	5.78E-04	938.4
11 42 12	2492	22.31	20.09	282.5	8.91	0.0	1.24E-01	4.28E-03	930.9
11 42 43	2543	22.48	21.02	312.9	16.19	0.0	2.66E-03	2.93E-03	929.2
11 43 15	2498	22.43	20.82	286.2	9.82	0.0	1.75E-01	5.94E-03	930.7
11 43 47	2599	22.24	21.14	311.8	15.96	0.0	2.21E-05	8.34E-04	927.3
11 44 19	2606	22.30	21.18	313.0	16.28	0.0	2.15E-05	1.03E-04	927.1
11 44 51	2592	22.39	21.19	313.9	16.48	0.0	2.42E-05	1.36E-04	927.6
11 45 23	2676	22.05	20.85	312.7	16.27	0.0	2.32E-05	1.16E-04	924.8
11 45 55	2652	22.05	20.72	312.2	16.11	0.0	2.21E-05	9.22E-05	925.6
11 46 27	2702	22.09	20.78	282.8	9.36	0.0	1.10E-01	-1.73E-04	924.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
11 46 59	2688	21.55	18.39	219.7	-5.51	0.0	5.82E-01	2.07E-02	924.4
11 47 31	3064	21.42	20.76	309.0	16.00	0.0	2.38E-05	1.42E-03	912.1
11 48 3	3088	21.18	21.04	311.7	16.60	0.0	2.34E-05	1.04E-04	911.3
11 48 35	3071	21.28	21.19	310.7	16.36	0.0	2.40E-05	4.38E-05	911.9
11 49 7	3108	21.33	21.29	308.9	16.05	0.0	3.13E-05	2.18E-04	910.7
11 49 39	3474	20.88	21.11	305.8	15.90	0.0	3.89E-05	2.12E-04	898.9
11 50 11	3806	20.32	20.89	305.1	16.23	0.0	4.00E-05	1.31E-04	888.2
11 50 43	4212	19.41	20.67	300.6	15.71	0.0	4.76E-05	2.28E-04	875.4
11 51 15	4554	18.68	20.53	296.0	15.11	0.0	4.25E-05	1.76E-04	864.6
11 51 47	4886	17.98	20.46	296.1	15.56	0.0	4.44E-05	1.41E-04	854.4
11 52 19	5180	17.31	20.33	292.1	15.01	0.0	3.80E-05	1.80E-04	845.3
11 52 51	5138	16.26	20.55	291.7	14.54	0.0	2.27E-05	1.51E-04	846.6
11 53 23	5048	17.63	20.92	292.6	14.96	0.0	2.35E-05	4.42E-04	849.4
11 53 55	5032	17.66	20.99	292.3	14.88	0.0	2.39E-05	1.95E-04	849.9
11 54 27	4994	17.67	20.99	293.2	15.01	0.0	2.13E-05	1.57E-04	851.0
11 54 59	4732	18.25	20.99	292.3	14.47	0.0	1.68E-05	1.86E-04	859.1
11 55 31	4360	19.00	21.00	294.9	14.57	0.0	3.09E-05	2.02E-04	870.7
11 56 2	3888	19.86	21.08	303.4	15.86	0.0	1.72E-05	1.38E-04	885.6
11 56 34	3509	20.82	20.94	302.7	15.24	0.0	1.57E-05	6.95E-05	897.7
11 57 6	3103	21.34	20.89	307.4	15.68	0.0	2.00E-05	1.87E-04	910.8
11 57 38	2668	21.89	20.98	314.1	16.54	0.0	1.81E-05	1.93E-04	925.1
11 58 10	2208	22.38	21.14	326.3	18.61	0.0	2.52E-05	7.69E-05	940.3
11 58 42	1717	22.98	21.50	337.7	20.46	0.0	2.37E-05	6.96E-05	956.8
11 59 14	1227	23.18	21.54	358.0	24.28	0.0	1.87E-04	2.84E-04	973.5
11 59 46	685	23.70	20.11	360.4	23.90	0.0	1.61E-01	5.25E-03	992.2
12 0 18	493	23.70	21.32	376.1	27.19	0.0	1.32E-03	2.55E-03	998.9
12 0 50	137	24.01	21.32	382.1	27.95	0.0	3.22E-03	5.89E-04	1011.4
12 1 22	12	24.22	21.51	385.0	28.45	0.0	1.01E-02	5.26E-04	1015.9
12 1 54	7	24.39	21.67	384.6	28.42	0.0	1.35E-02	7.80E-04	1016.0
12 2 26	8	24.45	21.81	384.2	28.35	0.0	1.16E-02	3.47E-04	1016.0
12 2 58	10	24.50	21.89	383.9	28.28	0.0	1.37E-02	4.58E-04	1016.0
12 3 30	16	24.56	21.82	383.5	28.24	0.0	1.14E-02	4.34E-04	1015.7
12 4 2	22	24.60	21.76	382.9	28.12	0.0	7.88E-03	3.92E-04	1015.5
12 4 34	24	24.56	21.76	382.4	27.98	0.0	7.49E-03	3.72E-04	1015.4
12 5 6	29	24.62	21.75	381.5	27.81	0.0	7.14E-03	5.85E-04	1015.3
12 5 38	32	24.61	21.67	381.2	27.74	0.0	7.12E-03	7.27E-04	1015.2

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 6 10	46	24.49	21.43	381.4	27.78	0.0	5.48E-03	6.62E-04	1014.7
12 6 41	42	24.46	21.39	381.5	27.79	0.0	5.70E-03	1.16E-03	1014.8
12 7 13	42	24.39	21.35	381.8	27.82	0.0	4.84E-03	1.00E-03	1014.8
12 7 45	40	24.37	21.32	382.0	27.87	0.0	4.50E-03	7.37E-04	1014.9
12 8 17	78	24.35	21.34	382.1	27.95	0.0	3.88E-03	1.07E-03	1013.5
12 8 49	78	24.32	21.24	382.2	27.98	0.0	3.86E-03	1.44E-03	1013.5
12 9 21	79	24.32	21.26	382.4	28.02	0.0	3.55E-03	1.63E-03	1013.5
12 9 53	82	24.40	21.22	382.4	28.05	0.0	3.22E-03	2.47E-03	1013.4
12 10 25	51	24.37	21.44	382.6	28.02	0.0	3.71E-03	1.68E-03	1014.5
12 10 57	9	24.35	21.59	382.8	27.97	0.0	6.93E-03	9.20E-04	1016.0
12 11 29	11	24.37	21.51	382.9	28.00	0.0	5.75E-03	1.20E-03	1015.9
12 12 0	124	24.51	21.23	382.7	28.25	0.0	3.54E-03	1.62E-03	1011.9
12 12 32	150	24.62	21.26	382.2	28.24	0.0	3.74E-03	1.71E-03	1011.0
12 13 4	139	24.76	21.30	382.0	28.23	0.0	4.95E-03	1.85E-03	1011.4
12 13 36	140	24.82	21.19	382.0	28.25	0.0	5.87E-03	1.50E-03	1011.3
12 14 8	139	24.88	21.49	382.0	28.28	0.0	4.45E-03	1.29E-03	1011.4
12 14 40	267	24.78	21.55	380.4	28.14	0.0	3.32E-03	8.74E-04	1006.8
12 15 12	302	24.84	21.55	379.8	28.10	0.0	3.42E-03	5.64E-04	1005.6
12 15 44	314	24.95	21.51	379.2	28.01	0.0	5.05E-03	5.55E-04	1005.2
12 16 16	318	24.95	21.43	379.1	28.00	0.0	2.86E-03	4.83E-04	1005.1
12 16 48	387	24.76	21.38	378.0	27.83	0.0	1.51E-03	3.28E-04	1002.6
12 17 20	704	24.06	21.28	373.0	27.04	0.0	7.44E-04	4.85E-04	991.6
12 17 52	962	23.55	21.24	369.7	26.61	0.0	5.12E-04	4.04E-04	982.6
12 18 24	1025	23.45	21.29	368.2	26.37	0.0	4.21E-04	3.13E-04	980.4
12 18 56	1036	23.49	21.37	366.9	26.09	0.0	5.81E-04	6.63E-04	980.1
12 19 28	1051	23.32	21.23	367.9	26.31	0.0	6.28E-04	8.13E-04	979.5
12 19 59	1067	23.31	21.24	367.4	26.20	0.0	3.48E-04	4.46E-04	979.0
12 20 31	1370	22.49	21.15	362.5	25.39	0.0	3.26E-04	6.18E-04	968.6
12 21 3	1717	22.03	21.02	348.1	22.59	0.0	1.75E-04	6.92E-04	956.8
12 21 35	1837	22.86	21.04	334.1	19.82	0.0	8.64E-05	5.72E-04	952.8
12 22 7	1854	22.51	20.93	339.1	20.93	0.0	2.44E-04	1.22E-03	952.2
12 22 39	1858	22.07	21.04	344.7	22.09	0.0	2.23E-04	2.41E-03	952.0
12 23 11	1849	22.45	20.71	339.5	20.99	0.0	1.64E-04	9.41E-04	952.3
12 23 43	1897	22.65	20.67	334.4	19.94	0.0	7.82E-05	6.23E-04	950.7
12 24 15	2276	22.51	20.47	325.0	18.49	0.0	6.01E-05	1.45E-04	938.0
12 24 47	2538	22.09	20.39	320.2	17.77	0.0	5.04E-05	1.05E-04	929.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 25 19	2581	21.90	20.37	320.3	17.62	0.0	2.87E-05	1.40E-04	927.9
12 25 51	2605	21.73	20.38	319.7	17.66	0.0	3.96E-05	1.41E-04	927.1
12 26 23	2616	18.82	20.43	319.0	16.63	0.0	3.96E-05	3.08E-04	926.8
12 26 55	2563	21.97	20.22	320.0	17.72	0.0	1.34E 01	5.55E-03	928.5
12 27 27	2267	21.99	19.01	145.5	-23.63	0.0	1.75E 02	8.57E-02	938.3
12 27 59	2351	22.28	20.53	323.9	18.31	0.0	6.54E-03	1.90E-02	935.6
12 28 31	2041	22.97	20.60	325.6	18.29	0.0	5.20E-05	4.81E-04	945.9
12 29 3	1705	22.53	20.86	349.5	23.07	0.0	7.83E-05	4.54E-04	957.2
12 29 35	1408	22.78	21.28	357.6	24.43	0.0	5.83E-05	1.10E-04	967.3
12 30 7	1143	23.30	21.20	362.9	25.32	0.0	1.43E-04	2.81E-04	976.3
12 30 38	796	24.12	21.20	368.8	26.26	0.0	2.98E-04	4.89E-04	988.4
12 31 10	410	25.31	21.20	374.4	27.23	0.0	5.45E-04	2.18E-04	1001.8
12 31 42	203	25.17	21.10	376.7	27.75	0.0	6.20E-03	1.53E-03	1009.1
12 32 14	133	24.72	21.02	381.2	28.00	0.0	5.35E-03	2.29E-03	1011.6
12 32 46	187	24.73	20.80	382.3	28.39	0.0	4.93E-03	1.94E-03	1009.7
12 33 18	213	24.78	20.65	382.3	28.48	0.0	3.57E-03	1.51E-03	1008.8
12 33 50	220	24.80	20.70	382.5	28.53	0.0	3.55E-03	1.27E-03	1008.5
12 34 22	192	24.77	20.69	382.6	28.48	0.0	3.07E-03	1.08E-03	1009.5
12 34 54	145	24.73	20.92	382.4	28.32	0.0	1.27E-03	9.08E-04	1011.2
12 35 26	134	24.88	20.97	381.9	28.25	0.0	1.27E-03	8.67E-04	1011.5
12 35 58	89	24.93	21.10	381.9	28.17	0.0	2.09E-03	1.06E-03	1013.2
12 36 30	75	24.99	21.17	382.1	28.20	0.0	2.36E-03	7.99E-04	1013.6
12 37 2	80	24.98	21.34	382.1	28.20	0.0	2.53E-03	8.22E-04	1013.5
12 37 34	86	25.00	21.37	382.4	28.29	0.0	3.66E-03	9.29E-04	1013.2
12 38 6	15	24.96	21.63	382.6	28.23	0.0	5.52E-03	1.64E-03	1015.8
12 38 38	14	25.03	21.63	382.9	28.27	0.0	5.60E-03	1.74E-03	1015.8
12 39 10	18	25.10	21.75	382.8	28.29	0.0	4.48E-03	1.19E-03	1015.7
12 39 42	19	25.18	21.70	382.6	28.27	0.0	4.65E-03	1.10E-03	1015.6
12 40 14	68	25.30	21.57	381.7	28.22	0.0	4.78E-03	9.54E-04	1013.9
12 40 46	87	25.36	21.64	380.9	28.10	0.0	4.62E-03	7.55E-04	1013.2
12 41 17	24	25.48	21.69	381.6	28.16	0.0	6.95E-03	1.36E-03	1015.5
12 41 49	32	25.41	21.67	381.5	28.13	0.0	6.42E-03	1.01E-03	1015.2
12 42 21	33	25.36	21.72	381.9	28.22	0.0	5.44E-03	7.19E-04	1015.1
12 42 53	27	25.48	21.75	381.5	28.15	0.0	7.08E-03	6.64E-04	1015.3
12 43 25	49	25.51	21.77	380.8	28.05	0.0	5.32E-03	6.00E-04	1014.6
12 43 57	57	25.42	21.89	381.4	28.16	0.0	4.40E-03	3.42E-04	1014.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 44 29	57	25.43	21.96	382.0	28.33	0.0	3.63E-03	3.21E-04	1014.3
12 45 1	56	25.43	22.02	382.1	28.33	0.0	5.40E-03	3.68E-04	1014.3
12 45 33	80	25.40	22.08	382.2	28.40	0.0	3.37E-03	2.94E-04	1013.5
12 46 5	118	25.33	21.89	381.3	28.25	0.0	2.39E-03	2.67E-04	1012.1
12 46 37	117	25.31	21.84	381.4	28.26	0.0	2.22E-03	3.99E-04	1012.2
12 47 9	111	25.29	21.74	381.7	28.31	0.0	2.48E-03	4.22E-04	1012.4
12 47 41	119	25.26	21.73	381.5	28.26	0.0	2.15E-03	3.82E-04	1012.1
12 48 13	309	25.08	21.77	377.4	27.64	0.0	7.81E-04	3.30E-04	1005.4
12 48 45	326	24.98	21.69	377.2	27.58	0.0	1.58E-03	4.51E-04	1004.8
12 49 16	343	24.90	21.63	377.5	27.65	0.0	5.70E-04	2.60E-04	1004.2
12 49 48	314	24.96	21.63	376.2	27.78	0.0	6.45E-04	2.06E-04	1005.2
12 50 20	366	24.98	21.48	376.7	27.56	0.0	2.77E-04	1.84E-04	1003.4
12 50 52	699	24.35	21.37	369.3	26.27	0.0	1.49E-04	1.26E-04	991.7
12 51 24	982	23.58	21.40	365.3	25.64	0.0	3.05E-05	1.73E-04	981.9
12 51 56	1033	23.41	21.50	365.2	25.66	0.0	6.98E-05	4.64E-05	980.1
12 52 28	1081	23.31	21.45	364.3	25.50	0.0	1.53E-04	3.63E-04	978.5
12 53 0	1043	23.45	21.40	365.5	25.77	0.0	2.74E-04	9.14E-04	979.8
12 53 32	1128	23.17	21.31	363.6	25.38	0.0	3.38E-04	1.51E-03	976.9
12 54 4	1346	22.69	21.20	357.9	24.32	0.0	7.74E-05	3.84E-04	969.4
12 54 36	1650	22.34	21.11	348.1	22.60	0.0	1.24E-04	4.71E-04	958.1
12 55 8	1912	22.15	20.98	335.9	20.22	0.0	2.09E-04	1.05E-03	949.3
12 55 40	2150	22.07	20.89	326.3	18.45	0.0	4.32E-05	3.64E-04	941.3
12 56 12	2406	21.86	20.83	319.8	17.38	0.0	4.94E-05	1.59E-04	932.8
12 56 44	2557	21.60	20.81	317.5	17.08	0.0	6.26E-05	1.60E-04	927.8
12 57 18	2696	21.74	20.87	315.1	16.84	0.0	2.81E-05	3.39E-05	923.2
12 57 50	2670	21.83	20.87	315.7	16.96	0.0	3.10E-05	2.60E-05	924.1
12 58 22	2635	21.96	20.82	317.4	17.32	0.0	2.43E-05	2.50E-05	925.3
12 58 54	2511	22.04	20.78	318.3	17.30	0.0	2.84E-05	1.05E-04	929.3
12 59 26	2428	22.01	20.83	318.9	17.26	0.0	3.24E-05	1.25E-04	932.1
12 59 57	1840	22.43	21.35	344.0	22.06	0.0	1.57E-04	1.12E-03	951.7
13 0 29	1690	22.14	21.33	349.8	23.01	0.0	2.61E-05	3.59E-04	956.8
13 1 1	1605	22.30	21.25	351.0	23.18	0.0	3.65E-05	2.58E-04	959.7
13 1 33	1464	22.68	21.47	353.0	23.48	0.0	2.40E-05	6.79E-05	964.4
13 2 5	1268	23.04	21.56	359.2	24.67	0.0	3.50E-05	9.73E-05	971.1
13 2 37	1052	23.44	21.60	365.0	25.73	0.0	4.76E-05	1.14E-04	978.5

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 3 9	834	24.05	21.54	367.0	25.96	0.0	6.39E-05	7.55E-06	986.0
13 3 41	584	24.72	21.62	370.0	26.40	0.0	1.68E-04	1.99E-04	994.7
13 4 13	316	25.17	21.61	374.8	27.13	0.0	9.85E-04	4.80E-04	1004.1
13 4 45	109	25.24	21.69	378.8	27.66	0.0	1.79E-03	4.63E-04	1011.4
13 5 17	23	25.03	21.78	381.4	27.99	0.0	3.02E-03	6.29E-04	1014.5
13 5 49	5	25.01	21.75	381.9	28.07	0.0	5.19E-03	6.31E-04	1015.1
13 6 21	5	25.08	21.88	381.8	28.09	0.0	4.03E-03	5.97E-04	1015.1
13 6 53	4	25.15	21.88	381.7	28.09	0.0	4.72E-03	5.20E-04	1015.2
13 7 25	5	25.18	21.90	381.7	28.09	0.0	4.95E-03	5.63E-04	1015.1
13 7 56	11	25.25	21.92	381.5	28.09	0.0	4.89E-03	6.68E-04	1014.9
13 8 28	17	25.30	21.85	381.2	28.05	0.0	5.29E-03	5.78E-04	1014.7
13 9 0	12	25.37	21.94	380.9	28.00	0.0	6.80E-03	4.71E-04	1014.9
13 9 32	22	25.43	21.86	380.3	27.90	0.0	6.49E-03	6.25E-04	1014.5
13 10 4	27	25.44	21.83	380.1	27.87	0.0	5.56E-03	4.14E-04	1014.4
13 10 36	41	25.49	21.81	379.8	27.84	0.0	4.74E-03	4.16E-04	1013.8
13 11 8	38	25.50	21.84	379.9	27.86	0.0	6.08E-03	4.22E-04	1013.9
13 11 40	44	25.49	21.94	379.7	27.83	0.0	5.32E-03	4.21E-04	1013.7
13 12 12	45	25.49	21.92	379.5	27.78	0.0	6.19E-03	3.55E-04	1013.7
13 12 44	85	25.50	21.89	378.4	27.62	0.0	6.74E-03	3.25E-04	1012.3
13 13 15	94	25.54	21.81	378.3	27.61	0.0	5.00E-03	2.36E-04	1012.0
13 13 47	86	25.58	21.82	378.9	27.77	0.0	5.14E-03	2.85E-04	1012.3
13 14 19	107	25.57	21.83	379.2	27.88	0.0	5.31E-03	2.52E-04	1011.5
13 14 51	128	25.53	21.83	378.5	27.74	0.0	3.81E-03	4.43E-04	1010.8
13 15 23	148	25.48	21.76	378.5	27.75	0.0	2.52E-03	2.62E-04	1010.0
13 15 55	170	25.41	21.80	378.5	27.78	0.0	2.23E-03	2.90E-04	1009.3
13 16 27	180	25.34	21.84	379.0	28.09	0.0	1.01E-03	1.09E-04	1008.9
13 16 59	190	25.31	21.89	379.5	28.03	0.0	2.27E-03	1.11E-04	1008.6
13 17 31	188	25.36	21.96	378.7	27.84	0.0	1.82E-03	9.66E-05	1008.6
13 18 3	178	25.39	21.93	378.2	27.73	0.0	2.17E-03	1.09E-04	1009.0
13 18 35	187	25.47	21.95	377.6	27.62	0.0	2.62E-03	1.51E-04	1008.7
13 19 7	178	25.45	21.93	377.4	27.56	0.0	2.40E-03	1.47E-04	1009.0
13 19 39	201	25.40	21.88	377.4	27.57	0.0	1.76E-03	1.81E-04	1008.2
13 20 11	193	25.49	21.92	376.8	27.45	0.0	2.38E-03	1.88E-04	1008.5
13 20 43	109	25.65	21.86	378.5	27.75	0.0	4.24E-03	3.21E-04	1011.4
13 21 14	14	25.41	21.91	381.0	28.05	0.0	1.27E-02	5.93E-04	1014.8
13 21 46	26	25.39	21.81	380.7	27.98	0.0	1.13E-02	4.32E-04	1014.4

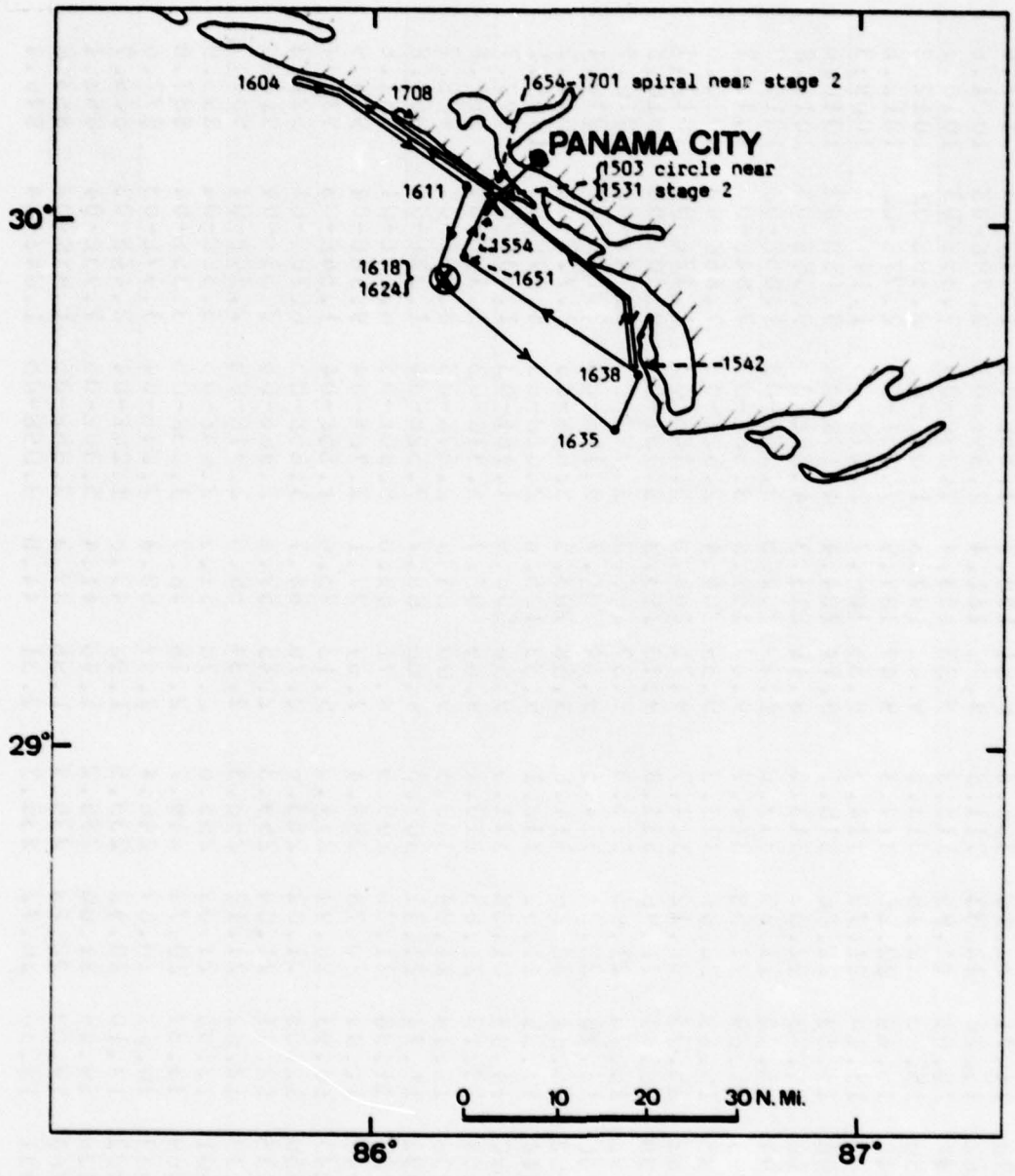
Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 22 18	99	25.42	21.78	379.1	27.78	0.0	4.86E-03	4.59E-04	1011.8
13 22 50	296	25.00	21.72	376.9	27.52	0.0	1.46E-03	5.75E-04	1004.8
13 23 22	516	24.40	21.68	374.7	27.24	0.0	7.57E-04	5.74E-04	997.1
13 23 54	817	23.70	21.64	369.4	26.34	0.0	8.48E-04	8.34E-04	986.7
13 24 26	1101	23.22	21.60	360.6	24.70	0.0	1.67E-04	8.02E-04	976.9
13 24 58	1404	22.42	21.49	356.2	24.01	0.0	1.96E-04	5.11E-04	966.5
13 25 30	1678	21.68	21.35	353.2	23.62	0.0	1.17E-04	8.81E-04	957.2
13 26 2	1926	21.25	21.21	347.6	22.68	0.0	7.42E-05	5.12E-04	948.8
13 26 34	2208	20.66	21.28	345.8	22.63	0.0	1.11E-04	1.47E-04	939.4
13 27 6	2427	20.26	21.19	340.7	21.75	0.0	8.56E-05	4.38E-04	932.1
13 27 38	2734	20.11	21.14	322.9	18.23	0.0	7.09E-05	1.14E-03	922.0
13 28 10	3031	20.92	21.02	304.7	14.85	0.0	6.37E-05	5.19E-04	912.3
13 28 42	3317	21.20	20.96	290.4	12.18	0.0	4.15E-05	1.01E-04	903.0
13 29 14	3661	20.97	20.92	281.1	10.61	0.0	7.26E-05	7.74E-05	892.0
13 29 46	4010	20.34	20.83	289.3	13.03	0.0	7.92E-05	3.12E-05	880.9
13 30 18	4355	19.69	20.83	285.3	12.60	0.0	7.42E-05	4.09E-05	870.0
13 30 50	4681	19.03	20.75	281.4	12.15	0.0	1.06E-04	1.69E-04	859.9
13 31 22	4935	18.49	20.80	280.7	12.32	0.0	1.46E-04	1.57E-05	852.0
13 31 53	5188	17.75	20.85	279.1	12.24	0.0	4.01E-05	1.60E-04	844.3
13 32 25	5165	17.49	18.53	190.4	-7.96	0.0	1.50E 02	1.76E-02	844.9
13 32 57	5179	17.23	18.46	177.7	-10.85	0.0	1.98E 02	8.69E-02	844.5
13 33 29	5322	17.83	20.81	277.3	12.10	0.0	5.86E-05	5.73E-03	840.2
13 34 1	5331	17.96	20.96	275.8	11.81	0.0	1.17E-04	8.94E-05	839.9
13 34 33	5268	18.08	21.07	275.0	11.60	0.0	8.99E-05	2.29E-06	840.6
13 35 5	5158	18.15	21.35	273.7	11.12	0.0	7.05E-05	-1.94E-06	844.0
13 35 37	4955	18.76	21.27	272.8	10.69	0.0	7.56E-05	8.90E-05	850.2
13 36 9	4699	19.41	21.12	272.8	10.38	0.0	1.66E-04	2.55E-05	858.1
13 36 41	4478	19.77	21.57	275.4	10.66	0.0	3.93E-05	1.67E-04	865.0
13 37 13	4021	20.45	21.09	286.2	12.44	0.0	3.91E-05	5.77E-05	879.3
13 37 45	3565	21.48	21.63	284.0	11.32	0.0	2.28E-05	-1.64E-06	893.8
13 38 17	3123	22.15	21.78	283.3	10.45	0.0	2.67E-05	6.67E-05	908.0
13 38 49	2798	16.69	21.79	316.6	15.93	0.0	5.53E-05	1.16E-03	918.6
13 39 21	2486	20.33	21.92	328.2	19.08	0.0	2.78E-05	6.24E-04	928.9
13 39 53	2509	20.37	21.71	324.4	18.27	0.0	3.63E-05	4.86E-04	928.1
13 40 25	2526	20.61	21.64	319.1	17.16	0.0	1.40E-04	2.34E-03	927.6
13 40 57	2554	20.46	21.67	321.5	17.71	0.0	3.54E-05	8.30E-04	926.6
13 41 29	2559	20.70	21.67	316.0	16.53	0.0	1.13E-04	1.98E-03	926.5

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 42 1	2429	21.01	21.81	325.8	18.65	0.0	1.06E-04	1.53E-03	930.7
13 42 32	2057	21.08	22.00	343.0	21.90	0.0	7.61E-05	3.70E-04	943.1
13 43 4	2065	21.03	21.87	341.9	21.63	0.0	6.74E-05	2.79E-04	942.8
13 43 36	2050	20.94	21.72	343.7	21.99	0.0	1.04E-04	1.17E-03	943.4
13 44 8	1664	21.79	21.85	354.3	23.97	0.0	7.10E-04	1.81E-03	956.3
13 44 40	1360	22.54	22.08	358.3	24.53	0.0	6.98E-04	1.49E-03	966.6
13 45 12	1358	22.62	22.21	359.8	24.91	0.0	1.29E-03	9.64E-04	966.7
13 45 44	1328	22.79	22.29	357.7	24.42	0.0	5.05E-04	4.72E-04	967.7
13 46 16	1373	22.56	22.36	357.8	24.45	0.0	9.83E-04	1.20E-03	966.2
13 46 48	1229	22.98	22.48	361.0	25.06	0.0	9.70E-04	1.44E-03	971.1
13 47 20	990	23.66	22.76	362.5	25.16	0.0	5.97E-04	8.63E-04	979.3
13 47 52	987	23.46	23.03	365.2	25.72	0.0	8.94E-04	1.77E-03	979.4
13 48 24	991	23.47	23.01	364.0	25.45	0.0	1.17E-03	1.49E-03	979.3
13 48 56	961	23.57	22.99	364.2	25.47	0.0	6.72E-04	1.42E-03	980.3
13 49 28	436	25.25	23.07	371.8	26.79	0.0	2.40E-03	7.03E-04	998.5
13 50 0	19	26.23	23.30	377.8	27.70	0.0	2.55E-02	1.66E-03	1013.2
13 50 32	11	26.14	23.17	377.7	27.62	0.0	2.69E-02	1.86E-03	1013.5
13 51 4	9	26.12	23.13	377.6	27.58	0.0	4.61E-02	2.06E-03	1013.6
13 51 36	8	26.05	23.10	378.9	27.85	0.0	3.04E-02	2.23E-03	1013.6
13 52 8	16	26.05	23.12	377.2	27.48	0.0	3.54E-02	2.34E-03	1013.4
13 52 40	28	26.03	22.99	377.9	27.67	0.0	1.96E-02	1.44E-03	1012.9
13 53 11	27	26.04	22.83	378.0	27.68	0.0	2.28E-02	1.19E-03	1012.9
13 53 43	29	25.98	22.82	378.0	27.68	0.0	2.34E-02	1.28E-03	1012.9
13 54 15	37	25.99	22.82	378.3	27.77	0.0	2.04E-02	9.87E-04	1012.6
13 54 47	71	25.83	22.81	378.4	27.79	0.0	1.07E-02	9.83E-04	1011.4
13 55 19	65	25.90	22.86	378.3	27.78	0.0	1.06E-02	8.77E-04	1011.6
13 55 51	61	25.95	22.82	378.7	27.89	0.0	1.31E-02	8.85E-04	1011.7
13 56 23	60	25.93	22.89	378.7	27.89	0.0	1.63E-02	1.42E-03	1011.8
13 56 55	73	25.87	23.02	378.6	27.87	0.0	1.10E-02	9.64E-04	1011.3
13 57 27	121	25.66	22.91	377.9	27.73	0.0	8.66E-03	8.19E-04	1009.6
13 57 59	119	25.76	22.88	378.9	27.98	0.0	8.48E-03	8.82E-04	1009.7
13 58 31	113	25.77	22.93	378.0	27.76	0.0	7.12E-03	7.87E-04	1009.9
13 59 3	125	25.67	22.92	377.6	27.66	0.0	6.57E-03	7.62E-04	1009.5
13 59 35	203	25.46	22.78	376.6	27.50	0.0	4.92E-03	6.29E-04	1006.7
14 0 7	203	25.39	22.75	376.6	27.48	0.0	4.95E-03	6.88E-04	1006.7
14 0 39	214	25.40	22.79	376.6	27.51	0.0	5.43E-03	5.81E-04	1006.4
14 1 10	195	25.53	22.80	376.2	27.42	0.0	5.34E-03	1.13E-03	1007.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 1 42	260	25.31	22.74	376.6	27.58	0.0	5.45E-03	5.15E-04	1004.7
14 2 14	390	24.82	22.67	375.3	27.36	0.0	4.44E-03	7.32E-04	1000.2
14 2 46	359	25.07	22.76	375.3	27.39	0.0	5.20E-03	5.17E-04	1001.2
14 3 18	375	25.01	22.74	374.8	27.27	0.0	2.69E-03	5.09E-04	1000.7
14 3 50	371	25.06	22.58	375.5	27.44	0.0	2.92E-03	4.17E-04	1000.8
14 4 22	359	25.15	22.56	375.3	27.42	0.0	2.25E-03	2.46E-04	1001.2
14 4 54	215	25.68	22.67	376.4	27.58	0.0	4.35E-03	5.75E-04	1006.3
14 5 26	199	25.61	22.69	377.0	27.64	0.0	3.83E-03	2.99E-04	1006.9
14 5 58	222	25.61	22.64	377.4	27.80	0.0	2.92E-03	3.24E-04	1006.0
14 6 30	321	25.45	22.67	377.2	27.90	0.0	2.07E-03	3.19E-04	1002.6
14 7 2	721	24.34	22.51	373.7	27.50	0.0	2.19E-03	5.17E-04	988.6
14 7 34	1129	23.33	22.31	365.9	26.13	0.0	5.29E-04	9.87E-04	974.5
14 8 6	1508	23.31	22.11	337.3	20.19	0.0	1.57E-04	1.43E-03	961.6
14 8 38	1828	23.92	22.02	318.0	16.49	0.0	6.65E-05	6.68E-04	950.8
14 9 9	2236	23.50	21.96	313.3	16.10	0.0	5.29E-05	1.75E-04	937.2
14 9 41	2652	23.09	21.88	305.8	15.04	0.0	5.88E-05	2.08E-04	923.4
14 10 13	3045	22.50	21.67	301.3	14.61	0.0	5.55E-05	1.54E-04	910.6
14 10 45	3393	22.01	21.67	294.6	13.61	0.0	5.05E-05	4.39E-05	899.3
14 11 17	3763	21.50	21.70	286.5	12.29	0.0	4.51E-05	9.22E-05	887.5
14 11 49	4141	20.95	21.73	278.3	10.98	0.0	4.62E-05	4.53E-05	875.5
14 12 21	4505	20.22	21.75	270.3	9.63	0.0	5.87E-05	5.04E-05	864.2
14 12 53	4855	19.33	21.73	270.0	10.01	0.0	6.51E-05	2.56E-05	853.3
14 13 25	5124	18.66	21.68	271.4	10.66	0.0	4.82E-05	1.23E-04	845.1
14 13 57	5153	18.60	21.22	269.7	10.32	0.0	3.35E-05	6.35E-05	844.1
14 14 29	5124	18.73	21.30	269.7	10.29	0.0	3.01E-05	5.00E-05	845.1
14 15 1	5185	18.52	21.36	266.0	9.51	0.0	3.34E-05	4.86E-05	843.2
14 15 33	5155	19.05	21.31	265.2	9.41	0.0	2.97E-05	2.18E-04	844.1
14 16 5	5096	19.18	21.24	266.2	9.54	0.0	3.16E-05	9.29E-05	845.9
14 16 37	5082	19.08	21.37	267.3	9.77	0.0	1.24E-04	2.04E-04	846.3
14 17 8	5133	18.49	21.61	268.1	9.88	0.0	4.56E-05	1.40E-04	844.8
14 17 40	5130	18.34	21.46	268.4	9.92	0.0	3.88E-05	6.38E-05	844.9
14 18 12	5149	18.44	21.49	267.8	9.83	0.0	4.97E-05	1.60E-04	844.3
14 18 44	5035	18.79	21.52	267.4	9.62	0.0	3.43E-05	2.42E-04	847.8
14 19 16	4542	20.27	21.65	266.9	8.93	0.0	3.52E-05	8.81E-05	863.0
14 19 48	4010	21.05	21.65	270.3	10.38	0.0	2.51E-05	1.28E-04	878.2

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 20 20	3416	21.90	21.75	290.9	12.83	0.0	2.45E-05	1.23E-04	897.1
14 20 52	2775	22.87	21.94	300.2	14.02	0.0	2.63E-05	1.47E-04	917.8
14 21 24	2231	23.42	22.14	306.3	14.52	0.0	3.39E-05	9.11E-05	935.7
14 21 56	1694	23.73	22.04	325.8	18.10	0.0	4.74E-05	2.34E-04	953.7
14 22 27	1071	23.49	22.00	361.3	25.08	0.0	6.32E-04	3.08E-04	974.9
14 22 59	541	24.52	21.99	370.4	26.49	0.0	2.27E-03	5.14E-04	993.2
14 23 31	181	25.21	21.93	375.6	27.22	0.0	7.68E-03	3.36E-04	1005.8
14 24 3	39	25.41	21.78	378.2	27.62	0.0	2.19E-02	2.16E-04	1010.8
14 24 35	7	25.41	21.93	378.7	27.66	0.0	3.97E-02	4.66E-04	1011.9
14 25 7	15	25.52	21.97	378.0	27.56	0.0	2.66E-02	4.98E-04	1011.7
14 25 39	8	25.59	22.00	377.8	27.52	0.0	3.41E-02	4.95E-04	1011.9
14 26 11	9	25.56	22.16	378.0	27.56	0.0	3.61E-02	4.77E-04	1011.9
14 26 43	7	25.62	22.15	377.9	27.56	0.0	2.88E-02	5.55E-04	1012.0
14 27 15	6	25.62	22.06	377.6	27.47	0.0	2.95E-02	6.25E-04	1012.0
14 27 47	14	25.63	21.95	377.8	27.56	0.0	2.74E-02	4.60E-04	1011.7
14 28 19	18	25.57	21.90	377.5	27.47	0.0	1.88E-02	4.53E-04	1011.6
14 28 51	19	25.49	21.87	378.1	27.58	0.0	1.96E-02	4.36E-04	1011.5
14 29 23	14	25.47	21.84	378.4	27.63	0.0	2.08E-02	4.19E-04	1011.7
14 29 55	15	25.42	21.76	378.5	27.64	0.0	1.81E-02	4.10E-04	1011.7
14 30 26	38	25.32	21.51	378.2	27.57	0.0	1.23E-02	4.81E-04	1010.9
14 30 58	41	25.27	21.44	378.4	27.61	0.0	1.28E-02	7.00E-04	1010.8
14 31 30	41	25.23	21.38	378.4	27.59	0.0	1.28E-02	6.22E-04	1010.8
14 32 2	49	25.19	21.42	378.7	27.66	0.0	1.07E-02	4.73E-04	1010.5
14 32 34	68	25.09	21.47	378.7	27.67	0.0	8.17E-03	4.02E-04	1009.8
14 33 6	94	24.96	21.40	378.6	27.65	0.0	8.34E-03	4.59E-04	1008.9
14 33 38	85	25.01	21.46	378.9	27.72	0.0	8.44E-03	3.27E-04	1009.2
14 34 10	92	24.99	21.45	378.7	27.68	0.0	7.39E-03	2.73E-04	1008.9
14 34 42	89	24.99	21.46	378.9	27.73	0.0	8.25E-03	2.83E-04	1009.0
14 35 14	172	24.76	21.37	378.1	27.62	0.0	6.03E-03	1.98E-04	1006.1
14 35 45	151	24.93	21.43	377.9	27.59	0.0	6.03E-03	2.86E-04	1006.9
14 36 17	168	24.87	21.51	377.8	27.58	0.0	4.78E-03	2.64E-04	1006.3
14 36 49	156	24.91	21.58	377.8	27.58	0.0	4.81E-03	2.47E-04	1006.7
14 37 21	167	24.85	21.36	377.8	27.58	0.0	5.40E-03	2.87E-04	1006.3
14 37 53	163	24.90	21.24	377.7	27.56	0.0	4.12E-03	3.17E-04	1006.4
14 38 25	158	24.84	21.13	377.7	27.53	0.0	3.60E-03	4.22E-04	1006.6
14 38 57	195	24.81	21.12	377.5	27.54	0.0	3.77E-03	3.72E-04	1005.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 39 29	176	24.84	21.13	377.5	27.52	0.0	5.48E-03	3.89E-04	1006.0
14 40 1	138	24.95	21.16	377.7	27.54	0.0	5.51E-03	3.94E-04	1007.3
14 40 33	155	24.81	21.04	377.8	27.53	0.0	6.21E-03	5.18E-04	1006.7
14 41 5	208	24.73	20.91	377.6	27.57	0.0	4.83E-03	3.94E-04	1004.9
14 41 37	229	24.63	20.96	377.5	27.56	0.0	3.69E-03	4.01E-04	1004.1
14 42 9	281	24.40	20.93	377.2	27.51	0.0	7.12E-02	4.04E-04	1002.3
14 42 41	264	24.57	20.97	377.6	27.62	0.0	3.51E-03	3.47E-04	1002.9
14 43 13	72	24.91	20.98	379.7	27.84	0.0	7.72E-03	3.53E-04	1009.6
14 43 44	-0	24.75	21.21	380.4	27.80	0.0	2.09E-02	7.66E-04	1012.2
14 44 16	55	24.58	20.99	380.1	27.77	0.0	9.69E-03	6.60E-04	1010.3
14 44 48	69	24.46	20.97	380.0	27.75	0.0	6.85E-03	3.22E-04	1009.8
14 45 20	52	24.48	20.98	380.5	27.82	0.0	1.01E-02	3.14E-04	1010.4
14 45 52	156	24.44	20.85	379.1	27.71	0.0	6.01E-03	2.89E-04	1006.7
14 46 24	450	23.40	21.93	331.1	16.61	0.0	3.91E 01	-1.27E-02	996.4
14 46 56	732	23.74	20.48	370.2	26.56	0.0	9.44E-04	1.59E-04	986.6
14 47 28	969	22.98	20.43	260.8	1.04	0.0	1.40E 02	5.19E-02	978.4
14 48 0	1284	22.87	20.25	357.0	24.29	0.0	3.27E-03	1.86E-02	967.6
14 48 32	1469	22.78	20.29	348.5	22.66	0.0	1.46E-04	8.66E-04	961.3
14 49 3	1799	22.29	20.23	339.9	21.15	0.0	7.24E-05	6.67E-04	950.2
14 49 35	1910	22.08	19.56	282.3	7.84	0.0	1.30E 01	2.79E-02	946.5
14 50 7	1774	22.55	19.72	340.7	21.38	0.0	3.06E 01	4.49E-02	951.0
14 50 39	1759	22.48	20.03	330.2	18.85	0.0	1.73E 01	1.36E-02	951.5
14 51 11	1544	22.56	20.73	301.9	11.80	0.0	2.82E 01	3.66E-02	958.8
14 51 43	1388	22.69	23.39	353.2	23.55	0.0	1.21E-04	4.14E-03	964.1
14 52 15	1250	22.55	23.21	359.7	24.75	0.0	1.07E-04	4.72E-03	968.8
14 52 47	1137	22.72	21.78	361.5	24.99	0.0	1.22E-04	6.57E-04	972.6
14 53 19	910	23.28	19.19	367.7	26.17	0.0	6.84E-04	3.36E-04	980.4
14 53 51	588	23.49	20.60	353.0	22.10	0.0	2.92E 01	1.56E-02	991.6



NOTE: Numbers give time in Central Standard Time

Figure B-4. Flight 4 Flight Track

FLIGHT# 4 5DEC78

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 3 45	671	14.19	22.43	308.9	9.22	128.8	1.19E-03	6.57E-04	989.8
15 4 17	470	14.71	22.48	308.8	8.91	158.7	1.55E-03	1.23E-03	997.0
15 4 49	262	15.26	22.33	311.8	9.28	161.4	2.39E-03	2.29E-03	1004.6
15 5 21	94	15.61	21.99	313.3	9.33	153.4	2.83E-03	7.39E-03	1010.7
15 5 53	50	15.78	22.18	313.9	9.42	167.3	1.05E-02	2.56E-02	1012.3
15 6 25	42	15.69	22.25	314.3	9.47	187.5	7.68E-03	2.77E-02	1012.6
15 6 57	131	15.14	21.72	314.5	9.55	186.7	2.27E-03	1.14E-02	1009.3
15 7 29	96	15.59	21.88	315.1	9.74	204.4	4.17E-03	9.45E-03	1010.6
15 8 1	90	15.73	22.03	313.5	9.41	213.3	4.58E-03	9.68E-03	1010.8
15 8 33	94	15.70	21.95	313.0	9.29	202.5	3.99E-03	1.05E-02	1010.7
15 9 5	93	15.69	22.08	314.7	9.67	197.8	3.56E-03	7.84E-03	1010.7
15 9 37	95	15.69	22.06	313.3	9.35	204.4	2.62E-03	7.86E-03	1010.6
15 10 9	82	15.93	22.12	314.7	9.71	209.0	5.40E-03	1.12E-02	1011.1
15 10 41	99	15.91	21.96	311.8	9.10	193.3	3.78E-03	9.20E-03	1010.5
15 11 13	93	15.76	21.95	313.3	9.37	165.2	3.77E-03	8.74E-03	1010.7
15 11 45	46	16.16	22.21	314.5	9.64	201.7	9.15E-03	2.61E-02	1012.4
15 12 17	52	15.81	22.26	314.6	9.58	203.5	5.60E-03	2.72E-02	1012.2
15 12 49	248	15.35	21.92	312.1	9.33	125.6	2.51E-03	4.97E-03	1005.1
15 13 21	590	14.09	21.52	311.3	9.56	108.9	1.96E-03	1.00E-03	992.7
15 13 53	894	13.17	21.05	310.1	9.69	95.7	1.31E-03	7.39E-04	981.8
15 14 25	1236	12.19	21.09	308.5	9.80	84.9	2.57E-03	8.92E-04	969.7
15 14 57	1492	11.74	21.31	303.0	9.00	89.7	7.52E-04	1.32E-03	960.8
15 15 29	1727	11.36	21.20	299.9	8.71	85.0	5.80E-05	6.11E-04	952.6
15 16 1	1947	11.07	20.78	293.4	7.67	77.1	2.78E-04	9.96E-04	944.9
15 16 33	2225	10.93	20.94	279.2	5.13	75.6	1.55E-04	1.56E-03	935.4
15 17 5	2550	12.55	21.02	263.6	2.76	64.7	3.65E-05	6.78E-04	924.3
15 17 37	2855	12.71	21.04	259.3	2.45	57.6	2.96E-05	3.51E-04	914.0
15 18 9	3133	12.62	21.19	256.3	2.34	56.0	2.91E-05	2.14E-04	904.7
15 18 41	3401	12.95	21.09	255.6	2.78	51.2	2.64E-05	5.38E-04	895.9
15 19 13	3669	13.67	20.72	249.7	2.16	48.7	3.33E-05	3.85E-04	887.0
15 19 45	3957	16.62	20.67	246.4	2.57	50.8	7.24E-04	3.97E-03	877.6
15 20 17	4202	19.10	20.92	239.5	1.98	47.8	1.20E-04	2.44E-03	869.7
15 20 49	4439	19.49	21.00	236.2	1.76	41.4	5.30E-05	7.93E-04	862.1
15 21 21	4700	19.03	20.88	235.3	1.96	37.3	2.88E-05	1.91E-04	853.8
15 21 53	4931	18.50	20.72	235.3	2.31	44.0	3.09E-05	1.04E-04	846.4

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 22 25	4940	18.61	21.12	235.3	2.34	46.2	2.17E-05	1.32E-04	846.2
15 22 57	4866	18.83	21.18	235.7	2.33	38.3	2.21E-05	2.75E-04	848.5
15 23 29	4946	18.49	21.14	235.9	2.48	37.8	2.03E-05	4.74E-04	846.0
15 24 1	5005	18.33	21.07	236.2	2.62	38.3	3.89E-05	5.02E-04	844.1
15 24 33	4991	18.32	21.12	236.6	2.68	40.0	5.82E-05	6.58E-04	844.5
15 25 5	4936	18.51	21.14	237.0	2.72	39.6	2.78E-05	2.67E-04	846.3
15 25 37	4698	19.05	21.06	236.9	2.32	42.8	1.96E-05	3.73E-04	853.8
15 26 9	4338	19.73	20.95	237.6	1.92	45.9	4.30E-05	5.31E-04	865.3
15 26 41	3913	17.71	20.91	242.9	1.90	42.5	6.58E-05	1.15E-03	879.0
15 27 13	3482	14.11	21.15	251.9	2.36	42.5	2.26E-05	4.12E-04	893.2
15 27 45	2996	13.13	21.23	257.5	2.43	44.5	2.16E-05	2.18E-04	909.3
15 28 17	2535	12.95	21.21	263.5	2.79	47.7	8.63E-05	6.12E-04	924.8
15 28 49	2042	11.83	21.39	284.5	6.13	54.5	1.05E-03	9.68E-03	941.7
15 29 21	1536	12.26	21.48	295.1	7.51	70.6	3.04E-04	1.19E-03	959.2
15 29 53	1069	13.22	21.50	300.1	7.86	78.6	7.69E-04	1.44E-03	975.7
15 30 25	693	13.83	21.56	308.7	9.13	78.5	2.07E-03	6.58E-04	989.0
15 30 57	461	14.59	21.58	308.4	8.77	93.4	1.58E-03	9.54E-04	997.4
15 31 29	297	15.18	21.62	309.9	8.91	109.5	2.47E-03	1.67E-03	1003.3
15 32 1	125	15.79	21.82	311.0	8.95	153.6	2.84E-03	4.01E-03	1009.5
15 32 33	35	16.20	21.90	311.4	8.93	182.8	8.20E-03	2.35E-02	1012.8
15 33 5	21	16.02	21.70	313.3	9.29	191.5	1.03E-02	3.10E-02	1013.3
15 33 37	19	16.12	21.66	314.7	9.62	206.7	8.07E-03	3.89E-02	1013.4
15 34 9	20	16.26	21.58	314.5	9.63	205.8	1.33E-02	4.25E-02	1013.4
15 34 41	17	16.39	21.60	315.3	9.83	203.1	1.01E-02	4.09E-02	1013.5
15 35 13	18	16.09	21.61	314.6	9.58	200.9	1.11E-02	4.40E-02	1013.4
15 35 45	33	15.76	21.60	314.2	9.44	180.9	5.05E-03	2.08E-02	1012.9
15 36 17	32	15.81	21.44	316.3	9.92	185.4	5.20E-03	2.36E-02	1012.9
15 36 49	28	15.80	21.31	314.6	9.53	186.9	6.23E-03	1.97E-02	1013.1
15 37 21	25	15.76	21.56	316.8	10.02	199.9	8.41E-03	2.32E-02	1013.2
15 37 53	44	15.66	21.47	316.4	9.94	190.9	3.23E-03	1.24E-02	1012.5
15 38 25	71	15.50	21.32	316.6	9.99	194.2	3.70E-03	6.61E-03	1011.5
15 38 57	77	15.56	21.34	315.7	9.83	200.6	5.43E-03	9.05E-03	1011.3
15 39 29	67	15.51	21.32	315.9	9.83	185.8	3.48E-03	8.32E-03	1011.7
15 40 1	63	15.54	21.46	314.9	9.61	180.6	2.92E-03	6.86E-03	1011.8
15 40 33	60	15.52	21.60	316.6	9.96	170.6	5.67E-03	1.20E-02	1011.9

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 41 5	65	15.47	21.70	314.3	9.46	181.3	3.36E-03	8.30E-03	1011.7
15 41 37	76	15.55	21.55	315.8	9.84	178.3	4.70E-03	9.95E-03	1011.3
15 42 9	85	15.48	21.49	313.3	9.28	155.9	2.29E-03	6.27E-03	1011.0
15 42 41	86	15.58	21.42	314.9	9.67	121.9	3.47E-03	6.89E-03	1011.0
15 43 13	89	15.70	21.46	314.6	9.63	172.3	4.73E-03	9.48E-03	1010.9
15 43 45	97	15.24	21.39	316.9	10.05	173.7	3.54E-03	5.26E-03	1010.6
15 44 17	96	15.39	21.25	316.7	10.04	183.9	3.47E-03	7.12E-03	1010.6
15 44 49	101	15.36	21.18	315.2	9.71	196.9	2.93E-03	4.74E-03	1010.4
15 45 21	100	15.45	21.08	315.7	9.85	174.1	3.47E-03	5.22E-03	1010.5
15 45 53	96	15.57	21.06	315.0	9.70	174.3	2.56E-03	4.96E-03	1010.6
15 46 24	103	15.62	20.96	315.3	9.81	172.7	1.62E-03	4.28E-03	1010.4
15 46 56	157	15.28	20.97	314.0	9.54	173.5	1.46E-03	1.61E-03	1008.4
15 47 28	165	15.34	21.01	314.7	9.72	173.1	1.95E-03	1.89E-03	1008.1
15 48 0	161	15.43	20.88	314.8	9.76	171.6	2.26E-03	1.37E-03	1008.2
15 48 32	157	15.51	20.89	313.0	9.37	170.2	2.32E-03	1.82E-03	1008.4
15 49 4	171	15.55	20.88	313.1	9.45	162.2	1.96E-03	1.59E-03	1007.9
15 49 36	287	15.11	20.89	311.7	9.27	149.0	1.65E-03	9.68E-04	1003.6
15 50 8	297	15.27	21.22	310.8	9.12	140.8	1.69E-03	6.74E-04	1003.3
15 50 40	296	15.43	21.21	311.1	9.24	148.8	1.89E-03	1.09E-03	1003.3
15 51 12	284	15.59	21.12	310.9	9.20	151.2	1.82E-03	1.38E-03	1003.8
15 51 44	454	14.89	21.14	309.5	9.08	143.1	1.80E-03	6.23E-04	997.6
15 52 16	489	14.82	21.17	309.2	9.06	144.0	1.54E-03	3.42E-04	996.4
15 52 48	491	14.93	21.23	308.0	8.83	135.9	1.31E-03	5.46E-04	996.3
15 53 20	484	14.96	21.09	308.4	8.91	138.7	1.74E-03	3.59E-04	996.5
15 53 52	496	14.87	21.37	307.9	8.80	131.5	2.04E-03	5.88E-04	996.1
15 54 24	483	14.95	21.39	306.1	8.39	140.5	1.60E-03	1.04E-03	996.6
15 54 56	483	14.89	21.34	307.8	8.76	138.8	1.77E-03	5.97E-04	996.6
15 55 28	485	14.78	21.39	309.0	9.00	139.6	1.71E-03	8.09E-04	996.5
15 56 0	488	14.84	21.24	308.7	8.96	150.5	1.55E-03	5.30E-04	996.4
15 56 32	477	14.78	21.30	310.1	9.23	151.5	1.74E-03	5.46E-04	996.8
15 57 4	447	15.15	21.28	309.0	9.03	160.9	1.79E-03	6.17E-04	997.9
15 57 36	216	16.18	21.29	308.1	8.59	174.6	1.22E-03	1.09E-03	1006.2
15 58 8	77	16.54	21.29	309.0	8.59	212.8	2.63E-03	6.43E-03	1011.3
15 58 40	73	16.25	21.34	309.4	8.60	225.3	2.55E-03	3.80E-03	1011.4
15 59 12	74	16.04	21.24	309.8	8.63	223.8	2.30E-03	4.75E-03	1011.4
15 59 44	75	16.10	21.24	309.0	8.46	227.6	3.29E-03	5.99E-03	1011.4

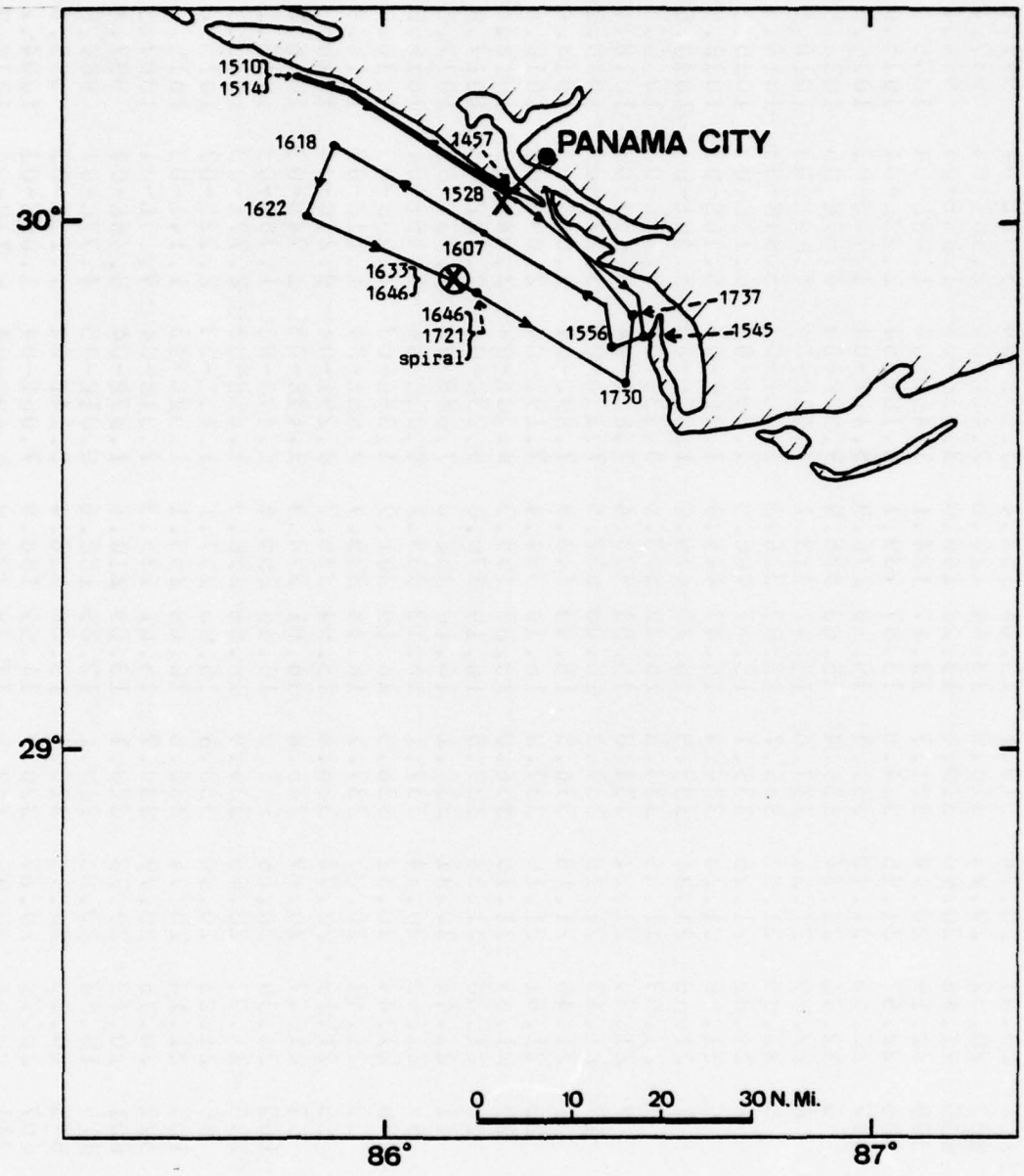
Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 0 16	60	16.28	21.22	307.6	8.16	247.1	2.89E-03	7.01E-03	1011.9
16 0 48	12	16.54	21.49	309.6	8.57	274.6	7.90E-03	2.47E-02	1013.7
16 1 20	6	16.39	21.52	308.8	8.35	226.2	5.10E-03	2.38E-02	1013.9
16 1 52	5	16.47	21.62	307.5	8.06	227.1	7.23E-03	2.92E-02	1013.9
16 2 24	5	16.64	21.59	309.7	8.61	256.9	6.99E-03	3.13E-02	1013.9
16 2 56	11	16.48	21.48	307.5	8.09	268.8	4.91E-03	2.84E-02	1013.7
16 3 28	305	15.24	21.07	308.3	8.58	236.9	2.20E-03	3.30E-03	1003.0
16 4 0	605	14.30	20.90	307.3	8.76	164.7	1.02E-03	5.75E-04	992.2
16 4 32	901	13.49	20.75	302.9	8.20	119.8	1.00E-03	8.77E-04	981.6
16 5 4	798	12.34	13.84	235.4	-7.07	147.2	1.37E 01	-4.06E-03	985.3
16 5 36	886	10.77	6.11	295.8	5.93	138.4	6.93E 01	-1.65E-02	982.1
16 6 8	1518	10.91	17.28	294.3	6.95	102.2	1.43E 01	2.70E-03	959.9
16 6 40	1845	12.01	16.51	273.5	3.36	68.1	3.95E 01	-4.27E-03	948.5
16 7 12	1847	12.48	14.62	238.3	-4.23	53.1	5.22E 01	-1.29E-02	948.4
16 7 43	1860	12.88	16.85	254.6	-0.52	51.8	9.22E 00	-2.25E-03	947.5
16 8 15	1824	12.60	15.17	238.9	-4.09	57.0	7.21E 01	-1.64E-02	948.7
16 8 47	1796	13.39	20.70	273.3	3.55	62.5	2.01E-03	1.11E-02	949.7
16 9 19	1404	13.36	20.90	293.7	7.23	98.6	1.06E-03	5.05E-03	963.4
16 9 51	1083	14.07	21.06	300.4	8.21	129.0	9.81E-04	9.90E-04	974.7
16 10 23	695	15.33	21.23	302.0	8.06	148.1	8.77E-04	7.03E-04	988.5
16 10 55	474	15.73	21.43	304.4	8.23	161.0	1.01E-03	6.92E-04	996.4
16 11 27	460	15.24	21.54	306.6	8.59	142.9	1.63E-03	8.79E-04	996.7
16 11 59	482	15.07	21.35	306.7	8.59	156.5	1.23E-03	6.44E-04	996.1
16 12 31	479	14.93	21.36	305.8	8.35	160.0	1.01E-03	4.17E-04	996.2
16 13 3	486	14.92	21.27	303.8	7.91	155.9	1.40E-03	6.53E-04	996.0
16 13 35	488	15.02	21.30	299.4	6.96	148.6	1.72E-03	3.98E-04	995.9
16 14 7	454	15.18	21.48	296.9	6.36	150.3	1.38E-03	6.90E-04	997.1
16 14 39	468	14.67	21.56	295.9	6.04	157.7	8.13E-04	4.23E-04	996.6
16 15 11	445	14.68	21.55	298.0	6.47	161.0	1.31E-03	6.46E-04	997.4
16 15 43	247	15.20	21.60	304.2	7.56	165.4	2.54E-03	1.45E-03	1004.6
16 16 15	134	15.65	21.58	304.1	7.41	128.3	1.68E-03	1.89E-03	1008.7
16 16 47	75	15.78	21.52	303.4	7.15	207.4	3.28E-03	4.08E-03	1010.8
16 17 19	31	15.52	21.30	304.1	7.15	235.0	3.74E-03	7.00E-03	1012.5
16 17 51	37	15.50	21.27	303.7	7.07	228.6	3.14E-03	8.33E-03	1012.3
16 18 23	57	15.39	21.28	305.4	7.46	220.5	3.13E-03	6.36E-03	1011.5
16 18 55	68	15.39	21.30	304.2	7.21	218.1	3.00E-03	5.60E-03	1011.1

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 19 27	64	15.56	21.35	302.3	6.83	206.0	3.13E-03	7.01E-03	1011.3
16 19 59	52	15.61	21.27	305.1	7.44	239.7	4.08E-03	7.29E-03	1011.7
16 20 31	-9	15.83	21.78	306.0	7.55	210.8	1.02E-02	3.79E-02	1013.9
16 21 3	16	15.77	21.58	307.3	7.88	216.9	8.92E-03	3.66E-02	1013.0
16 21 35	55	15.50	21.35	306.0	7.61	225.7	3.88E-03	8.03E-03	1011.6
16 22 7	70	15.55	21.53	302.1	6.79	215.2	4.69E-03	6.78E-03	1011.0
16 22 39	77	15.84	21.47	304.4	7.40	197.0	4.59E-03	1.03E-02	1010.8
16 23 11	68	15.56	21.19	304.7	7.38	220.7	3.05E-03	5.18E-03	1011.1
16 23 43	76	15.74	21.38	303.1	7.07	219.1	3.16E-03	6.46E-03	1010.8
16 24 15	65	15.97	21.50	302.7	7.03	196.1	3.55E-03	5.43E-03	1011.2
16 24 47	78	15.83	21.55	300.5	6.53	199.8	2.89E-03	5.27E-03	1010.8
16 25 19	80	15.86	21.62	302.4	6.97	185.8	3.13E-03	4.97E-03	1010.7
16 25 51	82	16.06	21.53	300.6	6.61	176.1	3.65E-03	5.48E-03	1010.6
16 26 23	55	16.22	21.57	303.4	7.23	159.6	3.30E-03	6.81E-03	1011.6
16 26 55	8	16.58	21.80	309.3	8.54	177.8	9.23E-03	3.24E-02	1013.3
16 27 27	5	16.53	21.90	307.0	8.00	167.9	1.24E-02	4.20E-02	1013.4
16 27 59	8	16.62	21.90	308.0	8.25	167.2	1.40E-02	4.25E-02	1013.3
16 28 31	6	16.61	21.85	305.5	7.68	162.5	1.24E-02	4.42E-02	1013.4
16 29 2	10	16.71	21.76	306.1	7.87	157.7	1.46E-02	4.32E-02	1013.2
16 29 34	23	16.65	21.57	303.6	7.32	153.6	9.01E-03	3.03E-02	1012.8
16 30 6	25	16.59	21.64	302.2	6.97	156.9	6.76E-03	2.71E-02	1012.7
16 30 38	32	16.68	21.81	301.6	6.90	151.2	9.58E-03	2.68E-02	1012.4
16 31 10	34	16.54	21.78	302.1	6.97	147.8	9.49E-03	1.26E-02	1012.3
16 31 42	30	16.65	21.47	299.8	6.48	145.7	1.02E-02	4.92E-02	1012.5
16 32 14	30	16.59	21.50	302.0	6.95	149.7	7.74E-03	2.43E-02	1012.5
16 32 46	35	16.74	21.54	300.5	6.67	147.5	9.00E-03	2.18E-02	1012.3
16 33 18	19	17.08	21.72	303.5	7.38	145.8	1.72E-02	4.95E-02	1012.9
16 33 50	10	16.96	21.90	306.5	8.01	140.1	2.94E-02	8.03E-02	1013.2
16 34 22	10	17.10	21.95	308.1	8.43	137.5	2.40E-02	7.92E-02	1013.2
16 34 54	9	17.01	21.97	306.7	8.08	146.0	1.92E-02	6.85E-02	1013.3
16 35 26	13	16.84	21.71	307.4	8.19	138.0	1.23E-02	5.46E-02	1013.1
16 35 58	42	16.69	21.41	309.0	8.58	166.5	1.13E-02	2.89E-02	1012.1
16 36 30	21	16.54	21.52	312.0	9.16	157.0	1.23E-02	3.19E-02	1012.9
16 37 2	8	16.61	21.73	313.9	9.58	150.7	2.60E-02	7.62E-02	1013.3
16 37 34	6	16.51	21.56	318.0	10.47	156.0	2.01E-02	7.53E-02	1013.4
16 38 6	10	16.34	21.35	315.5	9.88	153.5	1.46E-02	5.52E-02	1013.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 38 38	29	16.17	21.04	315.5	9.88	176.5	6.89E-03	2.39E-02	1012.5
16 39 10	4	16.49	21.47	316.0	10.02	185.0	1.97E-02	6.67E-02	1013.5
16 39 42	5	16.27	21.56	317.6	10.31	166.0	1.25E-02	7.37E-02	1013.4
16 40 14	2	16.35	21.70	317.7	10.36	164.0	1.79E-02	6.39E-02	1013.5
16 40 46	3	16.38	21.80	316.3	10.05	154.0	1.78E-02	7.25E-02	1013.5
16 41 18	25	16.19	21.52	313.8	9.48	161.2	6.83E-03	4.39E-02	1012.7
16 41 50	34	16.23	21.40	312.8	9.30	158.1	6.47E-03	1.93E-02	1012.4
16 42 22	29	16.32	21.51	313.1	9.36	171.3	8.30E-03	1.97E-02	1012.5
16 42 54	24	16.45	21.43	309.6	8.61	173.2	7.42E-03	1.92E-02	1012.7
16 43 26	36	16.45	21.33	310.4	8.81	170.1	6.51E-03	1.94E-02	1012.3
16 43 58	61	16.14	21.34	310.2	8.73	157.2	4.68E-03	8.49E-03	1011.4
16 44 30	71	16.18	21.38	309.9	8.72	159.0	3.97E-03	8.64E-03	1011.0
16 45 2	64	16.34	21.33	310.6	8.89	164.0	4.72E-03	0.00E 00	1011.3
16 45 34	59	16.24	21.33	306.8	8.00	154.8	2.73E-03	0.00E 00	1011.5
16 46 6	102	16.09	21.32	306.9	8.08	149.0	4.02E-03	0.00E 00	1009.9
16 46 38	132	16.06	21.23	307.8	8.33	149.1	3.18E-03	0.00E 00	1008.8
16 47 10	131	16.11	21.34	308.3	8.46	157.1	2.71E-03	0.00E 00	1008.8
16 47 42	133	16.04	21.24	308.3	8.44	161.0	2.88E-03	0.00E 00	1008.8
16 48 14	188	15.82	21.12	308.6	8.57	153.2	2.12E-03	0.00E 00	1006.7
16 48 46	278	15.28	20.89	308.7	8.65	136.2	3.72E-03	0.00E 00	1003.5
16 49 18	280	15.22	20.87	308.8	8.65	134.4	1.91E-03	0.00E 00	1003.4
16 49 50	337	15.23	20.61	308.7	8.77	139.7	3.12E-03	0.00E 00	1001.4
16 50 21	396	15.11	20.94	307.4	8.56	145.6	2.17E-03	0.00E 00	999.2
16 50 53	366	14.95	21.38	305.7	8.09	144.4	1.52E-03	0.00E 00	1000.3
16 51 25	486	14.48	21.26	306.4	8.37	142.2	1.98E-03	0.00E 00	996.0
16 51 57	489	14.75	21.36	305.3	8.21	141.8	9.66E-04	0.00E 00	995.9
16 52 29	498	14.84	21.25	305.9	8.39	143.1	2.30E-03	0.00E 00	995.5
16 53 1	503	14.80	21.23	305.4	8.27	127.5	1.24E-03	0.00E 00	995.4
16 53 33	524	14.82	21.09	307.7	8.83	140.1	1.21E-03	0.00E 00	994.6
16 54 5	813	13.99	20.92	300.4	7.62	122.8	7.00E-04	0.00E 00	984.3
16 54 37	1171	14.08	20.69	274.9	2.76	71.0	3.31E-04	0.00E 00	971.6
16 55 9	1409	13.91	20.60	272.7	2.73	65.8	3.82E-05	0.00E 00	963.2
16 55 41	1417	13.72	20.36	273.4	2.80	55.5	9.67E-05	0.00E 00	962.9
16 56 13	1409	13.89	20.09	275.1	3.26	56.8	2.42E-04	0.00E 00	963.2
16 56 45	1415	13.71	20.02	285.6	5.55	66.4	6.35E-04	0.00E 00	963.0
16 57 17	1466	13.78	20.02	283.3	5.17	61.8	4.52E-04	0.00E 00	961.2

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 57 49	1436	13.43	20.10	284.9	5.38	94.3	9.00E-04	0.00E 00	962.2
16 58 21	1495	12.95	17.81	286.6	5.76	84.6	4.16E 01	0.00E 00	960.2
16 58 53	1641	13.03	20.25	277.6	4.09	88.4	2.35E-04	0.00E 00	955.1
16 59 25	1907	14.08	11.69	263.7	1.81	58.9	2.94E 02	0.00E 00	945.9
16 59 57	2193	15.21	19.44	259.6	1.73	50.9	3.81E 01	0.00E 00	936.0
17 0 29	2456	15.73	19.81	258.1	2.05	61.5	4.69E-05	0.00E 00	927.1
17 1 1	2829	15.84	19.97	252.2	1.49	56.0	2.80E-05	0.00E 00	914.5
17 1 33	2931	16.13	20.20	249.8	1.21	56.5	2.08E-05	0.00E 00	911.0
17 2 5	2960	15.93	20.18	249.8	1.24	50.4	1.38E-05	0.00E 00	910.1
17 2 37	2994	15.24	20.16	251.6	1.57	50.7	1.54E-05	0.00E 00	908.9
17 3 9	2953	15.12	20.26	252.7	1.71	48.4	1.93E-05	0.00E 00	910.3
17 3 41	3005	15.61	20.42	251.7	1.70	48.6	2.24E-05	0.00E 00	908.6
17 4 13	3037	16.13	20.34	249.9	1.47	45.2	2.22E-05	0.00E 00	907.5
17 4 45	3073	16.92	20.24	248.3	1.34	45.6	2.09E-05	0.00E 00	906.3
17 5 17	3073	17.08	20.15	247.8	1.25	45.7	2.12E-05	0.00E 00	906.3
17 5 49	3094	16.80	20.02	247.7	1.20	45.6	1.82E-05	0.00E 00	905.6
17 6 21	3166	17.25	19.95	247.4	1.38	51.0	1.93E-04	0.00E 00	903.2
17 6 53	3414	18.72	20.23	247.5	2.20	52.1	2.19E-04	0.00E 00	895.0
17 7 25	3753	18.81	20.20	243.2	1.91	55.1	5.73E-05	0.00E 00	883.8
17 7 57	4079	19.77	20.19	237.5	1.42	52.1	1.96E-04	0.00E 00	873.2
17 8 29	4408	19.26	20.15	235.0	1.41	47.7	2.42E-04	0.00E 00	862.6
17 9 0	4756	18.34	20.20	233.7	1.60	44.7	8.60E-05	0.00E 00	851.5
17 9 32	5064	18.14	20.15	232.2	1.82	42.4	5.79E-05	0.00E 00	841.8
17 10 4	5351	17.67	20.10	230.8	1.95	41.8	3.37E-05	0.00E 00	832.8
17 10 36	5494	17.40	20.12	230.3	2.05	42.8	2.31E-05	0.00E 00	828.4
17 11 8	5521	17.25	20.15	230.3	2.08	39.1	2.15E-05	0.00E 00	827.6
17 11 40	5473	17.42	20.19	230.6	2.09	38.5	1.78E-05	0.00E 00	829.0
17 12 12	5443	17.38	20.19	230.9	2.09	37.2	1.60E-05	0.00E 00	830.0
17 12 44	5463	17.67	20.06	231.4	2.29	36.5	1.53E-05	0.00E 00	829.4
17 13 16	5451	17.66	20.03	231.5	2.31	36.4	1.74E-05	0.00E 00	829.7
17 13 48	5437	17.90	20.06	231.9	2.40	36.2	1.78E-05	0.00E 00	830.2
17 14 20	5328	17.91	19.55	232.3	2.30	36.4	1.19E-04	0.00E 00	833.6
17 14 52	5203	17.55	19.80	232.7	2.09	35.8	1.66E-04	0.00E 00	837.5
17 15 24	5337	17.37	19.88	232.1	2.16	36.4	3.40E-05	0.00E 00	833.3
17 15 56	5394	17.43	19.88	231.6	2.18	39.8	3.70E-05	0.00E 00	831.5

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 16 28	5207	17.67	20.00	232.4	2.04	37.1	3.87E-04	0.00E 00	837.3
17 17 2	4963	17.69	17.36	232.8	1.68	44.2	1.11E-02	0.00E 00	845.0
17 17 34	4811	18.19	19.71	234.6	1.88	41.5	3.63E-01	0.00E 00	849.8
17 18 6	4621	18.42	15.88	235.9	1.87	52.2	6.63E-04	0.00E 00	855.8
17 18 38	4427	18.48	18.31	233.7	0.99	58.4	3.54E-01	0.00E 00	862.0
17 19 10	4149	18.69	17.96	240.1	1.95	60.3	1.57E-04	0.00E 00	871.0



NOTE: Numbers give time in Central Standard Time

Figure B-5. Flight 5 Flight Track

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Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 55 15	1168	19.50	20.93	318.9	13.73	197.5	2.10E-04	9.81E-05	977.5
14 55 47	1106	19.61	20.78	319.1	13.68	152.4	3.57E-04	3.08E-04	979.6
14 56 19	883	20.62	20.93	318.9	13.44	128.6	2.40E-04	2.56E-04	987.4
14 56 51	635	21.46	20.90	319.4	13.28	146.0	3.03E-04	1.80E-04	996.2
14 57 23	379	22.19	20.99	321.7	13.47	124.1	3.45E-04	1.08E-04	1005.3
14 57 55	105	22.97	21.25	324.9	13.87	139.1	6.10E-04	2.23E-04	1015.0
14 58 27	17	22.60	21.40	331.8	15.16	276.9	5.40E-04	1.76E-03	1018.2
14 58 59	9	22.31	21.34	334.4	15.68	325.9	9.52E-04	4.87E-03	1018.5
14 59 31	8	22.09	21.21	333.6	15.41	313.1	9.21E-04	4.69E-03	1018.5
15 0 3	5	21.95	21.23	335.7	15.87	326.3	1.36E-03	5.61E-03	1018.6
15 0 35	6	21.82	21.25	335.1	15.67	406.9	1.39E-03	6.13E-03	1018.6
15 1 7	9	21.66	21.28	334.4	15.47	444.9	1.01E-03	5.16E-03	1018.5
15 1 39	7	21.69	21.31	333.9	15.36	476.4	1.07E-03	5.48E-03	1018.5
15 2 11	7	21.67	21.25	333.3	15.22	503.6	8.53E-04	3.97E-03	1018.5
15 2 43	7	21.55	21.21	334.8	15.53	533.4	7.65E-04	3.48E-03	1018.6
15 3 14	17	21.43	21.18	337.3	16.08	512.5	7.12E-04	3.14E-03	1018.2
15 3 46	21	21.46	21.18	336.5	15.93	448.9	7.89E-04	2.60E-03	1018.0
15 4 18	23	21.61	21.19	337.0	16.10	394.4	7.19E-04	2.09E-03	1018.0
15 4 50	22	21.67	21.16	336.0	15.87	359.3	9.28E-04	2.54E-03	1018.0
15 5 22	28	21.56	21.06	337.5	16.19	370.0	9.83E-04	2.34E-03	1017.8
15 5 54	41	21.44	20.91	337.1	16.10	358.0	7.68E-04	2.73E-03	1017.3
15 6 26	57	21.42	20.94	337.1	16.13	339.2	8.03E-04	7.25E-04	1016.8
15 6 58	58	21.44	20.92	336.9	16.09	301.9	1.39E-03	1.20E-03	1016.7
15 7 30	53	21.41	20.87	337.2	16.15	335.7	9.66E-04	1.11E-03	1016.9
15 8 2	55	21.19	20.74	336.6	15.94	325.7	8.29E-04	9.27E-04	1016.8
15 8 34	57	21.27	20.87	336.8	16.01	274.9	1.47E-03	1.24E-03	1016.8
15 9 6	103	21.30	20.86	337.0	16.16	255.6	1.47E-03	1.78E-03	1015.1
15 9 38	136	21.23	20.65	339.9	16.89	258.9	1.65E-03	2.77E-03	1013.9
15 10 10	89	21.25	20.60	338.6	16.50	257.1	1.45E-03	2.22E-03	1015.6
15 10 42	107	21.14	20.74	336.8	16.09	253.1	1.32E-03	1.14E-03	1015.0
15 11 14	322	20.78	20.79	330.7	15.01	239.3	7.31E-04	7.17E-04	1007.3
15 11 46	601	20.49	20.78	320.1	13.09	210.5	1.97E-04	8.46E-04	997.4
15 12 18	815	19.88	20.83	318.1	12.89	182.6	9.01E-05	4.77E-04	989.8
15 12 50	645	20.29	20.93	322.5	13.66	158.4	5.14E-04	1.12E-03	995.8
15 13 22	407	20.79	20.87	329.7	14.99	158.9	7.06E-04	1.09E-03	1004.2
15 13 54	241	20.95	20.96	332.8	15.39	229.9	6.49E-04	8.73E-04	1010.2

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 14 26	109	21.33	20.91	336.2	16.00	221.7	1.15E-03	9.53E-04	1014.9
15 14 58	48	21.49	20.84	336.7	16.03	255.6	1.59E-03	1.30E-03	1017.1
15 15 30	42	21.55	20.76	336.2	15.93	266.7	1.94E-03	1.57E-03	1017.3
15 16 2	44	21.58	20.71	335.3	15.73	267.6	1.31E-03	1.04E-03	1017.2
15 16 34	52	21.54	20.90	334.9	15.65	270.9	9.94E-04	9.48E-04	1016.9
15 17 6	78	21.58	21.00	335.9	15.93	282.1	8.82E-04	7.65E-04	1016.0
15 17 38	150	21.46	21.00	333.4	15.48	291.8	9.51E-04	5.49E-04	1013.4
15 18 10	155	21.65	21.00	332.2	15.28	289.3	8.17E-04	4.71E-04	1013.2
15 18 42	148	21.71	21.20	332.0	15.22	274.5	1.02E-03	6.51E-04	1013.5
15 19 14	144	21.64	21.24	332.7	15.37	317.6	8.18E-04	5.36E-04	1013.6
15 19 46	146	21.72	21.18	333.8	15.64	336.9	1.27E-03	9.02E-04	1013.5
15 20 18	158	21.84	21.06	331.4	15.16	334.9	1.03E-03	6.80E-04	1013.1
15 20 50	200	21.50	21.05	331.9	15.26	337.2	7.42E-04	3.94E-04	1011.6
15 21 22	243	21.38	20.95	330.0	14.88	326.8	8.07E-04	6.75E-04	1010.1
15 21 53	247	21.42	20.90	330.1	14.92	371.4	3.91E-04	3.28E-04	1009.9
15 22 25	249	21.53	20.86	329.6	14.83	387.2	5.50E-04	3.61E-04	1009.9
15 22 57	243	21.55	20.80	329.4	14.78	407.7	2.59E-04	3.20E-04	1010.1
15 23 29	247	21.65	20.75	328.9	14.71	379.1	4.24E-04	3.43E-04	1010.0
15 24 1	334	21.51	20.83	325.8	14.13	285.0	9.60E-04	7.84E-04	1006.9
15 24 33	464	21.33	20.93	325.4	14.27	190.4	7.93E-04	6.33E-04	1002.2
15 25 5	458	21.60	20.87	324.6	14.15	226.7	8.48E-04	2.71E-04	1002.4
15 25 37	460	21.72	20.90	323.7	13.99	241.4	3.54E-04	1.90E-04	1002.4
15 26 9	454	21.81	20.95	322.2	13.65	218.5	2.96E-04	1.15E-04	1002.6
15 26 41	462	21.76	20.97	321.0	13.37	159.7	1.46E-03	2.66E-03	1002.3
15 27 13	702	21.34	20.70	314.4	12.22	172.4	7.52E-05	3.75E-04	993.8
15 27 45	722	21.33	20.67	315.6	12.54	168.7	5.10E-05	7.57E-05	993.1
15 28 17	726	21.43	20.66	316.3	12.74	129.6	2.18E-04	8.67E-05	992.9
15 28 49	726	21.45	20.45	315.0	12.44	120.8	2.87E-04	8.33E-05	993.0
15 29 21	726	21.38	20.18	316.1	12.69	120.9	1.54E-04	1.61E-04	992.9
15 29 53	726	21.37	20.12	316.3	12.72	130.7	1.44E-04	3.94E-04	993.0
15 30 25	738	21.22	20.26	316.2	12.70	130.1	1.75E-04	3.09E-04	992.5
15 30 57	766	21.14	20.23	315.9	12.64	135.2	9.95E-05	5.72E-04	991.6
15 31 29	957	20.35	20.04	315.4	12.72	135.2	1.28E-04	5.06E-04	984.9
15 32 1	810	20.61	17.12	240.3	-4.76	159.0	5.23E 01	-1.36E-02	990.0
15 32 33	815	20.71	12.40	168.0	-21.62	167.2	1.27E 02	-2.53E-02	989.8
15 33 5	808	20.47	14.52	278.0	3.79	170.4	5.09E 00	-1.06E-03	990.1

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 33 37	723	20.47	14.82	197.6	-14.97	172.1	2.90E 01	-7.02E-03	993.1
15 34 9	891	20.57	18.66	314.8	12.50	158.2	1.16E 01	-2.46E-03	987.2
15 34 41	964	20.65	20.49	315.6	12.86	140.9	2.72E-04	5.52E-04	984.6
15 35 13	971	20.72	20.43	314.7	12.70	132.3	3.53E-04	5.49E-04	984.4
15 35 45	960	20.88	20.61	313.1	12.35	129.8	2.72E-04	4.20E-04	984.8
15 36 17	959	21.15	20.87	310.6	11.84	129.7	1.53E-04	1.46E-04	984.8
15 36 49	969	21.05	20.70	311.2	11.97	132.9	6.59E-05	6.10E-05	984.4
15 37 21	926	21.18	20.42	311.8	12.05	128.6	5.72E-05	4.07E-05	985.9
15 37 52	669	22.21	20.34	314.7	12.47	128.6	7.83E-05	7.17E-05	995.0
15 38 24	490	22.66	20.22	316.3	12.60	136.5	5.75E-05	4.29E-05	1001.3
15 38 56	467	22.16	20.33	322.3	13.81	152.1	1.23E-03	9.90E-04	1002.1
15 39 28	473	21.98	20.40	322.3	13.75	171.8	5.89E-04	8.10E-04	1001.9
15 40 0	467	21.89	20.38	321.7	13.57	141.6	7.58E-04	7.90E-04	1002.1
15 40 32	472	21.59	20.35	325.4	14.38	154.1	1.47E-03	1.32E-03	1001.9
15 41 4	470	21.35	20.54	327.7	14.82	160.1	9.90E-04	1.26E-03	1002.0
15 41 36	463	21.27	20.56	325.4	14.26	155.3	1.00E-03	1.64E-03	1002.3
15 42 8	585	21.26	20.52	321.3	13.55	166.3	1.35E-04	4.84E-04	998.0
15 42 40	872	20.62	20.44	318.3	13.29	128.7	1.20E-04	1.57E-04	987.8
15 43 12	742	20.38	17.18	235.7	-6.15	122.7	2.73E 01	-8.42E-03	992.4
15 43 44	904	20.49	19.38	314.5	12.43	117.8	2.84E 01	-8.77E-03	986.7
15 44 16	948	20.86	20.80	312.9	12.26	153.5	8.78E-05	2.50E-04	985.2
15 44 48	654	20.72	14.81	201.3	-14.26	180.3	3.91E 01	-7.99E-03	995.5
15 45 20	1218	20.10	20.48	311.0	12.20	172.6	2.57E-04	9.89E-04	975.8
15 45 52	1678	18.67	20.44	309.5	12.41	125.5	4.73E-05	1.01E-04	959.9
15 46 24	2013	17.89	20.31	310.1	13.00	111.9	1.01E-03	9.93E-04	948.5
15 46 56	2264	17.74	19.81	313.0	14.14	91.3	1.57E-03	3.39E-03	940.0
15 47 28	2489	18.21	19.96	320.1	16.34	84.2	5.60E-04	3.72E-03	932.4
15 48 0	2761	18.46	20.10	325.2	18.13	96.8	1.34E-04	2.13E-03	923.4
15 48 32	2993	18.13	18.86	291.5	10.84	103.4	2.27E 00	-3.18E-04	915.7
15 49 4	2965	17.42	15.04	317.5	16.46	90.1	6.29E 01	-1.28E-02	916.6
15 49 36	3271	17.35	17.26	309.2	15.18	86.4	2.57E 01	-6.38E-03	906.5
15 50 8	3729	17.70	19.71	311.8	16.78	82.1	1.18E-03	9.95E-04	891.7
15 50 40	3591	18.25	20.02	311.9	16.70	61.6	2.51E-05	2.21E-04	896.1
15 51 11	3332	18.44	20.16	316.7	17.33	81.1	2.94E-05	1.75E-04	904.5
15 51 43	3058	18.54	20.15	320.2	17.63	96.1	7.75E-04	1.24E-03	913.5
15 52 15	2704	18.95	20.15	320.5	17.11	93.6	3.23E-04	1.62E-03	925.2

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 52 47	2462	18.54	20.26	316.9	15.66	104.3	2.30E-04	2.99E-03	933.3
15 53 19	2456	18.07	20.30	315.9	15.29	113.7	3.92E-04	2.78E-03	933.5
15 53 51	2408	18.29	20.36	316.4	15.36	110.6	9.12E-04	4.91E-03	935.1
15 54 23	2090	18.07	20.47	306.3	12.35	137.6	1.27E-04	1.83E-03	945.9
15 54 55	1797	18.50	20.61	303.5	11.24	104.8	1.79E-05	2.04E-04	955.8
15 55 27	1557	19.02	20.67	305.9	11.42	95.4	1.75E-05	6.06E-05	964.0
15 55 59	1260	19.76	20.68	309.5	11.84	188.6	3.70E-05	1.03E-04	974.3
15 56 31	920	20.38	20.78	317.5	13.14	172.0	3.52E-04	6.81E-04	986.2
15 57 3	659	20.45	20.70	328.7	15.18	144.4	5.17E-04	9.85E-04	995.3
15 57 35	475	20.85	20.79	331.2	15.48	153.0	6.71E-04	1.91E-03	1001.8
15 58 7	482	21.21	20.71	325.0	14.18	137.0	2.61E-04	1.34E-03	1001.6
15 58 39	468	21.06	20.72	328.0	14.79	136.5	9.07E-04	2.68E-03	1002.1
15 59 11	469	21.17	20.73	329.3	15.14	161.0	1.02E-03	1.01E-03	1002.0
15 59 43	462	21.37	20.73	329.8	15.29	175.2	2.77E-03	1.49E-03	1002.3
16 0 15	481	21.30	20.80	328.8	15.09	196.8	2.19E-03	3.06E-03	1001.6
16 0 47	475	22.21	20.89	315.7	12.29	148.6	9.23E-05	5.92E-04	1001.8
16 1 19	473	22.17	20.79	318.8	13.00	146.5	3.07E-04	3.70E-04	1001.9
16 1 50	474	21.97	20.75	321.1	13.49	163.2	4.90E-04	4.03E-04	1001.9
16 2 22	497	21.70	20.68	319.7	13.13	138.5	1.36E-04	1.64E-04	1001.1
16 2 54	556	21.66	20.39	320.7	13.48	142.8	6.62E-05	7.10E-05	999.0
16 3 26	533	21.56	20.40	323.0	13.93	170.8	4.52E-04	2.02E-04	999.8
16 3 58	492	21.58	20.42	323.9	14.05	206.7	5.88E-04	1.89E-04	1001.2
16 4 30	407	21.68	20.37	325.6	14.31	209.8	7.86E-04	4.91E-04	1004.3
16 5 2	458	21.61	20.41	322.4	13.63	205.1	6.88E-04	3.78E-04	1002.4
16 5 34	478	21.82	20.66	319.5	13.07	203.8	4.95E-04	2.53E-04	1001.7
16 6 6	471	21.93	20.72	321.3	13.50	203.1	2.19E-04	1.61E-04	1002.0
16 6 38	464	21.96	20.45	319.6	13.10	186.8	1.03E-04	1.57E-04	1002.2
16 7 10	465	21.95	20.28	318.7	12.88	142.2	1.10E-04	2.14E-04	1002.2
16 7 42	446	22.03	20.19	318.2	12.77	135.8	1.41E-04	2.64E-04	1002.9
16 8 14	319	22.52	20.46	319.5	12.94	131.5	3.54E-04	3.33E-04	1007.4
16 8 46	244	22.61	20.58	319.2	12.71	134.1	2.81E-04	4.96E-04	1010.0
16 9 18	243	22.59	20.52	319.7	12.82	133.9	3.09E-04	2.87E-04	1010.1
16 9 50	245	22.53	20.62	320.9	13.09	114.7	5.10E-04	2.18E-04	1010.0
16 10 22	267	22.40	20.64	323.3	13.67	133.8	4.94E-04	2.27E-04	1009.2
16 10 54	228	22.48	20.72	325.8	14.19	186.2	5.65E-04	1.76E-04	1010.6
16 11 26	150	22.56	20.83	326.8	14.29	269.2	4.02E-04	1.34E-04	1013.4

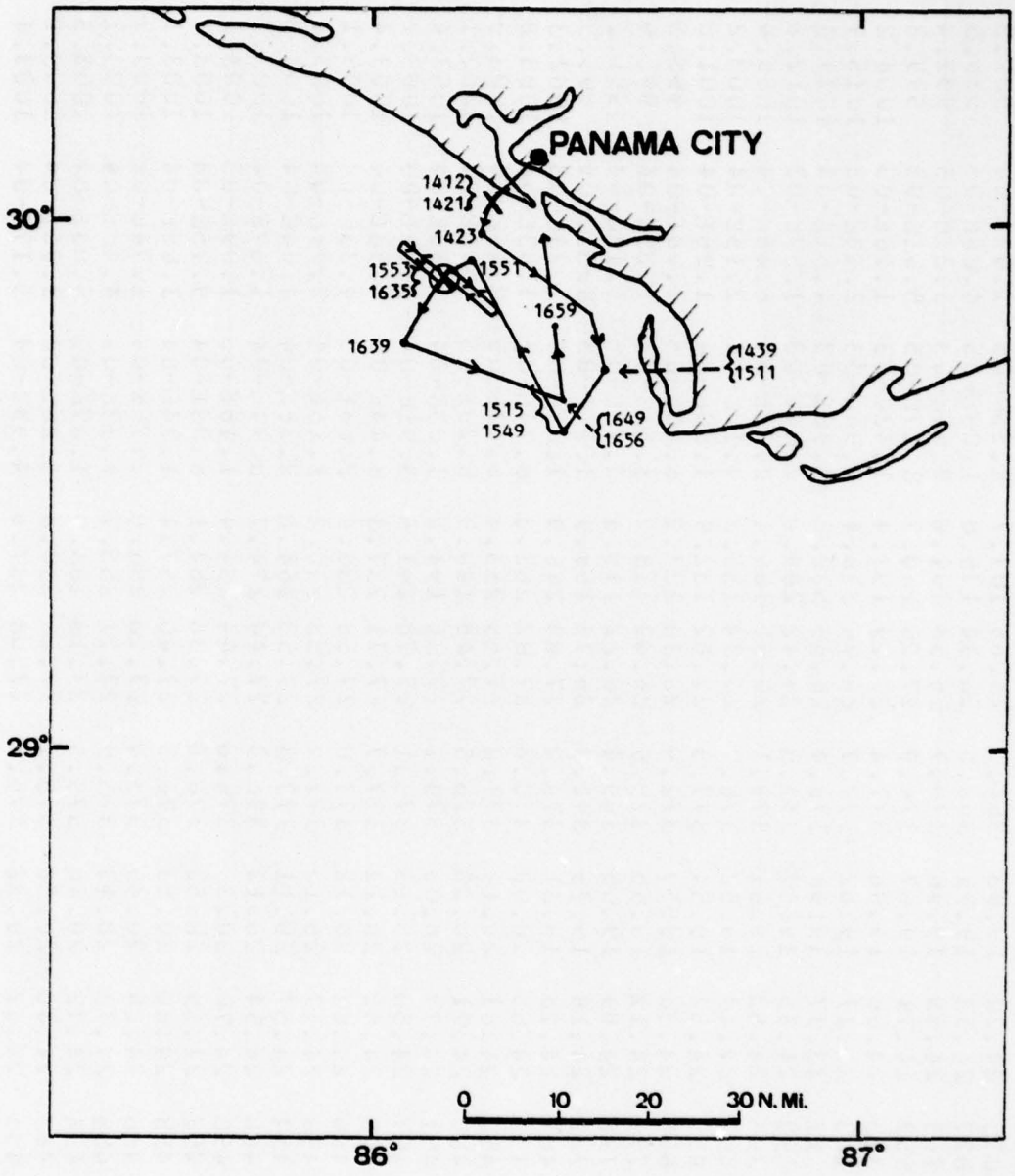
Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 11 58	140	22.43	20.79	326.4	14.13	216.3	3.58E-04	1.55E-04	1013.8
16 12 29	137	22.31	20.69	327.7	14.39	243.5	7.43E-04	1.98E-04	1013.9
16 13 1	151	22.24	20.57	325.7	13.92	212.2	8.71E-04	2.04E-04	1013.4
16 13 33	160	22.14	20.55	329.2	14.73	289.4	1.25E-03	3.95E-04	1013.1
16 14 5	154	22.04	20.44	330.4	14.97	359.9	1.00E-03	4.95E-04	1013.3
16 14 37	79	22.23	20.48	333.4	15.57	434.8	7.20E-04	7.68E-04	1015.9
16 15 9	54	22.28	20.50	330.6	14.88	401.7	8.02E-04	9.22E-04	1016.8
16 15 41	57	22.21	20.55	333.5	15.53	404.3	1.33E-03	1.23E-03	1016.7
16 16 13	61	22.18	20.45	334.4	15.75	408.5	1.24E-03	1.29E-03	1016.6
16 16 45	79	22.14	20.39	334.2	15.73	425.8	1.12E-03	1.52E-03	1016.0
16 17 17	386	21.57	20.30	325.9	14.29	229.3	1.31E-03	1.37E-03	1005.0
16 17 49	740	20.87	19.99	317.8	12.96	115.5	6.76E-05	5.66E-04	992.5
16 18 21	929	20.27	20.27	317.2	13.04	127.6	4.29E-05	2.42E-04	985.8
16 18 53	924	20.13	20.28	318.2	13.23	138.6	4.39E-05	2.00E-04	986.0
16 19 25	917	19.92	20.17	319.5	13.45	144.7	4.45E-05	1.82E-04	986.2
16 19 57	914	19.77	20.21	320.7	13.67	148.7	6.72E-05	1.99E-04	986.4
16 20 29	906	19.70	20.19	321.7	13.87	167.2	7.41E-05	2.20E-04	986.6
16 21 1	950	19.58	20.38	322.0	14.00	177.7	8.11E-05	1.85E-04	985.1
16 21 33	972	19.54	20.45	321.8	13.98	175.4	3.83E-05	1.80E-04	984.3
16 22 5	983	19.55	20.60	321.2	13.88	167.2	3.99E-05	1.90E-04	983.9
16 22 37	990	19.46	20.60	322.0	14.05	178.6	3.22E-04	5.28E-04	983.7
16 23 8	872	19.86	20.86	325.7	14.77	181.8	6.36E-04	7.49E-04	987.8
16 23 40	655	20.63	20.97	326.6	14.74	263.9	8.43E-04	6.63E-04	995.5
16 24 12	471	21.22	21.06	328.6	14.99	305.5	8.77E-04	5.53E-04	1002.0
16 24 44	467	21.24	21.37	326.0	14.38	210.8	5.94E-04	4.73E-04	1002.1
16 25 16	467	21.06	21.36	328.3	14.86	197.5	1.02E-03	6.71E-04	1002.1
16 25 48	480	20.96	21.19	330.2	15.29	226.3	8.10E-04	4.48E-04	1001.7
16 26 20	477	21.03	21.08	329.6	15.18	200.2	6.73E-04	3.11E-04	1001.8
16 26 52	470	21.07	21.07	330.2	15.32	176.6	7.26E-04	3.65E-04	1002.0
16 27 24	475	21.14	21.02	331.5	15.65	155.3	9.75E-04	6.51E-04	1001.8
16 27 56	482	21.27	21.04	328.4	14.51	145.0	7.67E-04	7.75E-04	1001.6
16 28 28	460	21.34	21.11	328.3	14.93	144.3	7.39E-04	8.51E-04	1002.4
16 29 0	379	21.45	21.04	331.3	15.48	161.3	9.63E-04	6.77E-04	1005.3
16 29 32	244	21.83	21.11	333.3	15.78	187.8	6.29E-04	3.87E-04	1010.1
16 30 4	258	21.62	20.88	333.7	15.84	168.4	7.75E-04	6.22E-04	1009.6
16 30 36	261	21.57	20.83	334.4	15.99	161.7	7.40E-04	6.22E-04	1009.4

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 $C^2/m^{2/3}$	P mb
16 31 8	244	21.49	20.75	334.9	16.04	172.7	7.32E-04	6.22E-04	1010.0
16 31 40	195	21.60	20.80	334.8	15.95	183.3	5.82E-04	4.52E-04	1011.8
16 32 12	152	21.88	20.64	332.7	15.45	182.4	5.36E-04	4.73E-04	1013.3
16 32 44	149	21.80	20.57	333.4	15.60	188.1	5.59E-04	2.30E-04	1013.5
16 33 16	156	21.64	20.52	335.7	16.10	209.2	8.35E-04	1.82E-04	1013.2
16 33 48	169	21.64	20.70	338.5	16.77	252.7	9.57E-04	5.33E-04	1012.7
16 34 20	154	21.74	20.53	336.7	16.35	234.1	7.83E-04	7.90E-04	1013.3
16 34 52	143	21.69	20.63	339.4	16.95	205.4	4.77E-04	3.95E-04	1013.7
16 35 24	136	21.82	20.57	338.8	16.81	150.6	7.06E-04	5.83E-04	1013.9
16 35 56	149	21.57	20.41	341.3	17.36	207.6	1.12E-03	6.44E-04	1013.5
16 36 27	148	21.57	20.44	342.9	17.72	187.0	1.05E-03	1.18E-03	1013.5
16 36 59	158	21.55	20.36	342.8	17.72	203.3	9.17E-04	6.55E-04	1013.1
16 37 31	95	21.74	20.32	344.1	17.95	297.5	1.03E-03	1.42E-03	1015.4
16 38 3	68	21.81	20.40	342.3	17.50	302.3	1.36E-03	1.83E-03	1016.4
16 38 35	73	21.69	20.45	346.0	18.32	299.8	1.23E-03	2.05E-03	1016.2
16 39 7	49	21.83	20.41	343.2	17.67	275.7	7.69E-04	2.90E-03	1017.0
16 39 39	22	22.07	20.58	344.0	17.87	298.2	4.67E-03	6.81E-03	1018.0
16 40 11	50	21.90	20.57	344.9	18.09	282.9	9.05E-04	5.15E-03	1017.0
16 40 43	76	21.69	20.45	345.7	18.26	282.4	1.74E-03	2.05E-03	1016.1
16 41 15	71	21.73	20.36	346.2	18.38	287.8	1.54E-03	2.27E-03	1016.2
16 41 47	78	21.72	20.36	345.7	18.28	202.9	9.56E-04	2.12E-03	1016.0
16 42 19	85	21.58	20.40	346.2	18.35	215.9	1.14E-03	1.57E-03	1015.7
16 42 51	79	21.80	20.40	345.3	18.21	250.5	1.17E-03	1.91E-03	1016.0
16 43 23	88	21.95	20.49	344.6	18.13	149.7	1.01E-03	1.32E-03	1015.7
16 43 55	99	21.92	20.55	344.9	18.19	156.1	9.08E-04	1.11E-03	1015.2
16 44 27	126	21.81	20.65	342.9	17.75	188.6	6.74E-04	1.20E-03	1014.3
16 44 59	118	21.88	20.71	343.6	17.93	211.7	1.02E-03	1.27E-03	1014.6
16 45 31	119	21.81	20.73	344.4	18.09	206.0	8.94E-04	1.73E-03	1014.5
16 46 3	44	22.09	20.70	346.0	18.39	230.4	2.05E-03	3.01E-03	1017.2
16 46 35	-2	22.14	20.86	347.3	18.62	253.7	5.83E-03	1.95E-02	1018.9
16 47 6	-1	22.23	20.96	347.9	18.78	268.6	8.02E-03	2.10E-02	1018.8
16 47 38	126	21.73	20.70	343.9	17.97	228.6	1.51E-03	7.41E-03	1014.3
16 48 10	488	20.86	20.54	340.0	17.56	142.9	5.62E-04	8.26E-04	1001.4
16 48 42	745	20.17	20.46	338.8	17.60	136.6	6.00E-04	7.74E-04	992.3
16 49 14	996	19.55	20.30	335.7	17.24	125.2	6.83E-04	1.51E-03	983.5
16 49 46	1288	19.44	20.45	319.8	14.17	116.0	2.11E-04	8.38E-04	973.3

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 50 18	1521	19.13	20.54	312.6	12.92	106.6	4.76E-05	1.89E-04	965.3
16 50 50	1767	18.73	20.55	313.1	13.43	93.9	4.39E-05	2.76E-04	956.8
16 51 22	1923	18.85	20.47	313.8	13.93	90.9	2.05E-04	6.49E-04	951.5
16 51 54	1988	18.96	20.63	313.0	13.92	109.8	2.41E-04	9.85E-04	949.3
16 52 25	1989	18.95	20.65	315.3	14.46	103.5	5.14E-05	2.83E-04	949.3
16 52 57	1956	18.84	20.47	314.8	14.25	87.3	1.46E-04	5.46E-04	950.4
16 53 29	2039	18.83	20.35	314.4	14.32	89.5	2.03E-04	6.37E-04	947.6
16 54 1	2026	18.84	20.40	315.6	14.56	93.1	4.06E-04	1.09E-03	948.0
16 54 33	2003	18.77	20.41	314.8	14.32	89.5	7.88E-05	3.84E-04	948.8
16 55 5	2038	18.88	20.19	315.4	14.56	87.8	7.05E-05	2.51E-04	947.6
16 55 37	2237	18.91	20.22	320.8	16.20	87.1	2.85E-05	2.25E-04	940.9
16 56 9	2457	18.74	20.28	324.1	17.37	88.1	4.51E-05	2.08E-04	933.5
16 56 41	2781	18.52	20.23	326.9	18.58	93.0	3.96E-05	2.91E-04	922.7
16 57 13	3040	18.27	20.21	324.5	18.49	90.3	1.03E-04	2.24E-04	914.1
16 57 45	3364	17.99	20.14	320.8	18.19	83.2	2.70E-05	8.71E-05	903.5
16 58 17	3670	17.85	19.95	316.1	17.69	73.4	2.92E-05	1.50E-04	893.6
16 58 49	3918	17.41	19.88	314.4	17.64	70.5	3.84E-05	2.06E-04	885.6
16 59 21	4182	16.93	19.86	311.4	17.32	66.7	3.72E-05	1.43E-04	877.1
16 59 53	4445	16.62	19.79	307.3	16.81	63.2	4.43E-05	1.64E-04	868.8
17 0 24	4749	16.10	19.59	301.7	15.99	58.1	1.82E-04	6.01E-04	859.2
17 0 56	5065	15.37	19.42	297.3	15.38	60.8	2.30E-05	2.58E-04	849.3
17 1 28	5318	14.83	19.28	296.0	15.42	61.1	2.42E-05	2.79E-04	841.6
17 2 0	5617	14.16	19.11	295.0	15.56	53.0	8.48E-05	1.45E-04	832.4
17 2 32	5944	13.75	19.15	290.0	14.91	61.7	4.54E-05	2.49E-04	822.4
17 3 4	6243	13.75	19.23	282.3	13.75	54.2	1.34E-04	2.72E-04	813.4
17 3 36	6594	13.18	19.09	276.9	13.04	50.2	8.09E-05	2.05E-04	803.0
17 4 8	6877	12.47	18.96	275.1	12.95	52.0	1.76E-04	3.58E-04	794.6
17 4 40	7185	11.81	18.79	270.7	12.37	50.0	1.12E-04	3.81E-04	785.6
17 5 12	7516	11.10	18.84	267.5	12.08	53.3	6.22E-05	6.63E-04	776.0
17 5 44	7871	10.25	18.80	264.2	11.75	52.3	2.06E-04	2.95E-04	765.8
17 6 16	8118	9.67	18.74	262.9	11.73	54.7	2.25E-04	5.77E-04	758.8
17 6 48	8372	9.19	18.54	256.9	10.77	55.3	1.34E-04	8.43E-04	751.6
17 7 20	8678	9.75	18.59	239.0	7.56	51.3	9.72E-05	2.17E-03	743.0
17 7 52	8951	11.42	18.32	215.7	3.29	46.8	2.54E-04	1.87E-03	735.5
17 8 26	9168	11.46	18.40	210.0	2.43	40.9	4.36E-05	8.05E-04	729.5
17 8 58	9228	11.30	18.72	209.7	2.41	22.6	1.64E-04	6.35E-04	727.9

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 9 30	9217	11.50	18.59	209.4	2.38	24.0	1.01E-04	1.04E-03	728.2
17 10 2	9164	11.49	17.99	208.9	2.18	24.8	6.93E-05	1.03E-03	729.6
17 10 34	9153	11.38	18.30	209.3	2.23	23.8	2.92E-05	2.48E-04	729.9
17 11 6	9237	11.56	18.56	209.2	2.38	23.4	2.71E-05	4.04E-04	727.6
17 11 38	9182	11.67	18.05	210.6	2.61	23.7	6.60E-05	3.51E-04	729.1
17 12 10	9179	11.49	18.06	211.7	2.81	24.3	1.10E-04	5.55E-04	729.2
17 12 42	9188	10.96	18.73	211.5	2.69	23.8	1.02E-04	5.39E-04	729.0
17 13 14	9103	11.08	18.88	211.2	2.50	24.1	4.89E-05	4.69E-04	731.3
17 13 46	8831	11.70	18.47	213.1	3.88	24.5	5.37E-05	8.88E-04	738.8
17 14 18	8439	9.55	17.58	255.9	10.74	29.3	2.01E-04	8.89E-04	749.7
17 14 50	7918	10.69	16.71	260.8	11.20	33.4	4.48E-05	3.03E-04	764.5
17 15 22	7405	12.08	19.67	264.4	11.44	37.4	2.39E-04	5.97E-04	779.2
17 15 54	6643	14.26	19.55	268.7	11.59	37.2	1.82E-04	4.55E-04	801.5
17 16 25	5764	15.39	19.78	284.3	13.77	50.7	8.42E-04	1.28E-03	827.9
17 16 57	4936	16.73	20.33	295.1	15.04	73.1	6.82E-05	2.02E-04	853.4
17 17 29	4419	17.41	20.42	303.1	16.05	88.6	5.49E-05	2.66E-04	869.6
17 18 1	3645	18.86	20.75	311.3	16.85	94.0	1.67E-05	1.26E-04	894.4
17 18 33	2782	19.98	20.92	318.3	17.08	102.5	7.01E-05	3.34E-04	922.6
17 19 5	1865	19.69	21.41	302.2	11.41	113.6	1.07E-04	1.71E-03	953.5
17 19 37	1144	20.61	21.27	319.3	14.10	139.6	3.71E-04	7.85E-04	978.3
17 20 9	698	20.84	21.52	331.7	16.08	165.4	5.40E-04	1.49E-03	994.0
17 20 41	477	21.37	21.61	332.1	15.86	156.7	5.36E-04	6.96E-04	1001.8
17 21 13	533	20.97	21.57	332.2	15.89	166.1	8.60E-04	8.37E-04	999.8
17 21 45	540	21.12	21.48	331.6	15.80	161.2	1.06E-03	1.95E-03	999.5
17 22 17	529	21.31	21.51	326.4	14.63	174.7	8.64E-04	1.05E-03	999.9
17 22 49	516	21.16	21.53	326.8	15.12	187.2	8.74E-04	1.06E-03	1000.4
17 23 21	526	21.00	21.61	328.7	15.06	180.0	1.11E-03	1.15E-03	1000.0
17 23 53	512	20.88	21.68	327.7	14.76	173.1	6.43E-04	5.06E-04	1000.5
17 24 24	450	21.52	21.55	322.7	13.66	177.8	7.76E-04	1.51E-03	1002.7
17 24 56	231	22.13	21.59	326.8	14.32	207.8	7.35E-04	6.78E-04	1010.5
17 25 28	184	22.12	21.52	326.6	14.19	245.9	1.29E-03	1.41E-03	1012.2
17 26 0	189	21.88	21.38	327.4	14.30	247.6	1.01E-03	1.79E-03	1012.0
17 26 32	173	21.77	21.36	328.0	14.37	262.4	1.46E-03	1.31E-03	1012.6
17 27 4	114	21.89	21.32	328.0	14.29	293.5	1.26E-03	2.22E-03	1014.7

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 27 36	100	21.80	21.27	332.6	15.30	327.8	3.73E-03	4.65E-03	1015.2
17 28 8	101	21.51	21.35	331.6	14.97	340.4	3.10E-03	4.70E-03	1015.2
17 28 40	109	21.37	21.21	332.2	15.09	343.2	2.36E-03	4.24E-03	1014.9
17 29 12	106	21.28	21.21	331.0	14.76	353.2	1.88E-03	4.83E-03	1015.0
17 29 43	102	21.29	21.20	332.6	15.15	377.5	4.40E-03	7.00E-03	1015.1
17 30 15	162	20.94	21.20	331.7	14.96	394.9	2.13E-03	6.02E-03	1013.0
17 30 47	508	19.80	20.99	329.1	14.75	235.4	1.25E-03	1.05E-03	1000.7
17 31 19	819	20.03	20.73	314.3	12.08	140.4	4.37E-04	4.05E-03	989.7
17 31 51	1062	19.88	20.64	310.4	11.66	175.7	2.75E-05	2.25E-04	981.2



NOTE: Numbers give time in Central Standard Time

Figure B-6. Flight 6 Flight Track

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 12 40	1311	23.64	19.91	360.5	25.06	150.9	1.08E-05	9.84E-04	973.4
14 13 12	1076	24.20	19.98	364.2	25.64	109.7	1.53E-05	2.02E-04	981.5
14 13 44	877	24.53	19.96	368.5	26.34	135.0	1.06E-05	4.86E-05	988.5
14 14 16	763	24.39	19.96	370.7	26.58	194.6	2.61E-05	3.21E-05	992.4
14 14 48	552	24.79	19.87	374.9	27.26	160.3	8.17E-05	5.61E-05	999.8
14 15 19	315	24.66	19.88	377.4	27.29	193.4	1.42E-03	1.28E-03	1008.2
14 15 51	103	24.27	19.62	377.7	26.74	378.4	2.94E-03	2.29E-03	1015.7
14 16 23	12	23.97	19.96	378.4	26.59	532.8	9.98E-03	4.61E-03	1019.0
14 16 55	192	24.39	19.87	379.5	27.42	289.0	2.04E-03	1.87E-03	1012.6
14 17 27	395	24.52	19.61	379.1	27.81	186.4	2.32E-04	6.46E-04	1005.4
14 17 59	457	24.48	19.52	378.7	27.84	153.3	3.13E-04	2.15E-04	1003.2
14 18 31	495	24.52	19.54	377.3	27.62	132.9	1.80E-04	1.98E-04	1001.8
14 19 3	675	24.36	19.57	372.9	26.88	127.2	6.46E-05	2.08E-04	995.5
14 19 35	779	24.12	19.65	370.6	26.49	118.2	3.51E-05	1.85E-04	991.9
14 20 7	798	24.09	19.65	369.4	26.22	115.8	3.72E-05	1.43E-04	991.2
14 20 39	722	24.18	19.73	372.3	26.78	169.9	1.21E-05	8.30E-05	993.9
14 21 11	481	24.28	19.81	378.2	27.69	246.9	1.09E-04	1.73E-03	1002.3
14 21 43	438	24.63	20.00	378.6	27.82	262.3	8.74E-05	3.63E-04	1003.8
14 22 15	453	24.81	20.14	377.0	27.55	253.4	6.48E-05	2.45E-04	1003.3
14 22 47	487	24.71	20.20	376.5	27.48	149.9	8.29E-05	1.90E-04	1002.1
14 23 19	451	24.77	20.08	378.1	27.81	194.2	1.03E-04	1.88E-04	1003.4
14 23 51	457	24.50	20.13	378.1	27.70	241.5	3.91E-04	1.32E-03	1003.2
14 24 23	450	24.82	20.12	377.7	27.71	237.3	8.44E-05	4.58E-04	1003.4
14 24 55	460	24.84	20.12	377.0	27.58	230.4	2.86E-05	4.33E-04	1003.1
14 25 27	450	24.77	20.10	377.2	27.56	240.3	1.16E-04	2.79E-04	1003.4
14 25 58	454	24.57	20.11	377.3	27.55	264.0	2.38E-04	4.06E-04	1003.3
14 26 30	460	24.54	20.13	376.9	27.44	274.7	8.94E-04	5.67E-04	1003.1
14 27 2	458	24.70	20.39	376.6	27.44	254.4	1.16E-03	1.09E-03	1003.1
14 27 34	457	24.59	20.52	376.6	27.38	264.1	6.08E-04	9.75E-04	1003.2
14 28 6	458	24.80	20.53	376.3	27.40	257.4	1.74E-04	3.68E-04	1003.1
14 28 38	456	24.64	20.49	375.4	27.20	256.0	2.25E-04	1.74E-04	1003.2
14 29 10	459	24.78	20.43	375.5	27.21	255.7	4.33E-04	4.48E-04	1003.1
14 29 42	454	24.72	20.40	375.5	27.18	268.0	1.07E-03	5.08E-04	1003.3
14 30 14	463	24.60	20.36	375.2	27.08	280.0	5.26E-04	3.60E-04	1003.0
14 30 46	451	24.62	20.32	375.3	27.08	267.6	4.93E-04	5.17E-04	1003.4

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 31 18	458	24.68	20.32	374.9	27.01	307.4	1.94E-04	1.42E-04	1003.1
14 31 50	464	24.70	20.28	374.5	26.95	311.4	1.46E-04	1.12E-04	1002.9
14 32 22	455	24.61	20.34	375.1	27.04	307.8	1.28E-04	1.17E-04	1003.2
14 32 54	450	24.63	20.33	375.2	27.05	298.6	1.15E-04	7.72E-05	1003.4
14 33 26	456	24.63	20.04	374.4	26.88	294.6	1.10E-04	8.79E-05	1003.2
14 33 58	445	24.69	19.85	374.1	26.80	286.4	1.41E-04	9.26E-05	1003.6
14 34 30	453	24.70	19.92	373.9	26.78	287.8	1.55E-04	1.15E-04	1003.3
14 35 2	456	24.68	19.93	373.7	26.73	303.5	2.88E-04	2.00E-04	1003.2
14 35 34	457	24.62	19.95	374.0	26.78	302.0	4.06E-04	2.39E-04	1003.2
14 36 6	459	24.49	20.04	374.9	26.94	274.3	2.08E 00	-1.66E-03	1003.1
14 36 38	445	24.57	19.86	374.6	26.88	282.5	1.11E-03	1.59E-04	1003.6
14 37 10	459	24.48	19.91	374.8	26.92	278.4	9.62E-04	1.68E-04	1003.1
14 37 42	469	24.49	19.99	374.8	26.95	294.7	6.61E-04	5.78E-04	1002.7
14 38 14	462	24.52	19.98	374.8	26.95	287.1	6.48E-04	3.90E-04	1003.0
14 38 46	465	24.48	20.00	375.4	27.07	302.7	4.99E-04	3.72E-04	1002.9
14 39 17	464	24.38	20.04	376.0	27.18	314.6	1.20E-03	4.70E-04	1002.9
14 39 49	462	24.26	20.07	376.4	27.22	338.6	1.05E-03	4.58E-04	1003.0
14 40 21	374	24.42	20.08	377.3	27.30	332.2	9.54E-04	6.77E-04	1006.1
14 40 53	152	24.67	20.08	378.9	27.30	277.7	1.65E-03	4.68E-04	1014.0
14 41 25	-5	24.84	20.32	379.1	27.06	400.6	1.37E-02	4.19E-03	1019.6
14 41 57	157	24.75	20.07	379.3	27.43	301.9	1.82E-03	2.82E-03	1013.8
14 42 29	421	24.38	19.94	376.7	27.24	234.1	7.80E-04	3.90E-04	1004.5
14 43 1	693	24.21	20.04	371.0	26.43	194.9	2.62E-04	3.07E-04	994.9
14 43 33	918	23.87	20.06	367.6	25.97	185.2	1.02E-05	2.12E-04	987.0
14 44 5	1100	23.57	20.05	364.2	25.45	227.8	1.39E-05	1.46E-04	980.7
14 44 37	1408	23.21	20.06	352.0	23.08	200.5	1.32E-05	4.47E-04	970.1
14 45 9	1721	23.77	19.86	333.2	19.50	74.7	8.97E-06	5.27E-04	959.4
14 45 41	1927	23.78	19.83	331.3	19.50	65.8	4.98E-06	2.80E-04	952.4
14 46 13	2173	23.37	20.03	326.1	18.65	73.4	4.07E-06	2.72E-04	944.1
14 46 45	2447	22.91	20.13	323.3	18.41	60.5	4.37E-06	3.17E-04	934.9
14 47 16	2694	22.64	20.06	318.1	17.60	64.9	3.72E-06	1.49E-04	926.7
14 47 48	2956	22.05	19.98	315.4	17.33	62.2	4.03E-06	2.71E-04	918.1
14 48 20	3209	21.65	20.06	314.9	17.58	59.9	4.60E-06	1.84E-04	909.8
14 48 52	3489	21.52	20.07	304.2	15.60	60.9	4.86E-06	2.21E-04	900.7
14 49 24	3677	21.47	19.93	302.3	15.52	63.2	3.18E-06	2.29E-04	894.6

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 49 56	3669	21.32	19.87	305.9	16.31	72.8	3.92E-06	1.97E-04	894.9
14 50 28	3626	21.11	19.73	310.6	17.26	62.8	2.21E-05	2.56E-04	896.3
14 51 0	3786	20.76	20.02	300.6	15.15	54.2	5.15E-06	3.30E-04	891.2
14 51 32	4063	20.16	20.11	298.4	15.01	53.8	5.29E-06	2.38E-04	882.3
14 52 4	4400	19.32	20.03	296.4	14.94	52.9	5.07E-06	1.26E-04	871.6
14 52 36	4710	18.79	19.73	290.5	14.04	36.7	6.33E-06	2.39E-04	861.9
14 53 8	5006	18.49	19.80	286.2	13.53	39.8	4.70E-06	3.11E-04	852.8
14 53 40	5170	18.36	19.78	292.2	15.17	39.1	3.21E-06	2.28E-04	847.7
14 54 12	5201	18.32	19.92	294.3	15.70	38.6	3.21E-06	1.70E-04	846.7
14 54 44	5208	18.36	19.98	293.4	15.52	42.6	3.88E-06	2.12E-04	846.5
14 55 16	5126	18.10	19.90	290.6	14.67	42.8	2.99E-06	2.06E-04	849.0
14 55 48	5112	17.91	19.66	286.5	13.65	46.1	3.90E-06	2.88E-04	849.5
14 56 20	5062	18.05	19.90	284.7	13.17	47.3	3.16E-06	2.88E-04	851.0
14 56 52	5067	18.08	20.12	286.6	13.63	47.2	5.35E-06	2.66E-04	850.9
14 57 24	5086	18.04	20.09	293.2	15.16	46.8	3.72E-06	2.56E-04	850.3
14 57 55	5061	18.19	20.11	291.0	14.65	47.8	3.33E-06	2.85E-04	851.0
14 58 27	4854	18.79	20.23	283.6	12.74	50.2	2.51E-06	2.50E-04	857.5
14 58 59	4665	19.01	20.31	286.2	13.04	51.3	2.93E-06	1.99E-04	863.3
14 59 31	4456	19.30	20.28	288.9	13.34	48.9	2.16E-06	2.23E-04	869.9
15 0 3	4221	19.79	20.40	291.8	13.68	49.2	3.03E-06	1.40E-04	877.3
15 0 35	3964	20.25	20.58	298.6	14.88	57.3	2.68E-06	1.51E-04	885.5
15 1 7	3767	20.67	20.59	298.2	14.52	63.3	2.46E-06	1.30E-04	891.8
15 1 39	3541	21.19	20.58	300.0	14.64	61.5	5.72E-06	2.65E-04	899.0
15 2 11	3283	21.73	20.61	307.2	15.96	58.3	3.75E-06	2.41E-04	907.4
15 2 43	3023	22.12	20.63	313.2	16.97	59.3	3.52E-06	6.29E-05	915.9
15 3 15	2712	22.74	20.67	315.3	17.02	53.9	2.56E-06	1.59E-04	926.1
15 3 47	2483	23.17	20.64	318.8	17.51	49.1	2.98E-06	9.89E-05	933.7
15 4 19	2125	23.70	20.69	323.1	17.95	63.4	2.83E-06	2.24E-04	945.7
15 4 51	1793	24.19	20.59	325.6	18.00	84.6	2.36E-06	1.97E-04	956.9
15 5 23	1492	23.90	20.57	341.6	21.07	111.9	7.52E-06	2.59E-04	967.2
15 5 55	1147	23.60	20.59	359.1	24.36	273.7	6.11E-06	2.34E-04	979.1
15 6 27	872	24.13	20.48	364.0	25.12	309.7	8.68E-06	2.57E-04	988.6
15 6 59	563	24.58	20.50	371.5	26.40	337.1	3.52E-04	4.33E-04	999.4
15 7 31	356	24.51	20.52	375.4	26.84	357.8	5.40E-04	4.30E-04	1006.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 8 3	193	24.81	20.35	377.7	27.14	376.3	5.17E-04	4.95E-04	1012.5
15 8 34	70	24.54	20.46	378.4	26.95	398.7	4.55E-03	2.14E-03	1016.9
15 9 6	35	24.43	20.50	379.1	26.99	429.4	7.78E-03	3.08E-03	1018.1
15 9 38	234	24.66	20.36	377.9	27.24	398.3	8.40E-04	1.16E-03	1011.1
15 10 10	454	24.54	20.28	374.1	26.78	320.0	3.17E-04	2.75E-04	1003.3
15 10 42	573	24.59	20.17	370.6	26.20	237.4	1.12E-04	1.72E-04	999.1
15 11 14	636	24.54	20.28	370.5	26.32	269.9	2.62E-04	3.17E-04	996.9
15 11 46	519	24.67	20.44	373.3	26.77	345.9	4.88E-04	3.44E-04	1001.0
15 12 18	483	24.59	20.59	373.8	26.77	350.7	7.55E-04	4.83E-04	1002.3
15 12 50	472	24.54	20.58	374.9	26.99	330.1	2.63E-03	5.19E-04	1002.7
15 13 22	460	24.44	20.65	376.2	27.24	329.5	2.66E-03	1.09E-03	1003.1
15 13 54	291	24.49	20.61	378.7	27.49	394.6	7.92E-04	1.13E-03	1009.1
15 14 26	255	24.24	20.67	379.3	27.45	403.2	8.59E-04	8.03E-04	1010.3
15 14 58	254	24.08	20.61	379.7	27.47	408.6	2.14E-03	1.75E-03	1010.4
15 15 30	202	24.13	20.62	379.8	27.41	368.1	2.63E-03	2.10E-03	1012.2
15 16 2	50	24.22	20.75	379.6	27.05	533.6	6.12E-03	9.47E-04	1017.6
15 16 33	3	24.14	20.94	380.3	27.08	601.3	1.24E-02	9.16E-04	1019.3
15 17 5	3	24.05	21.01	380.9	27.16	601.1	1.31E-02	4.06E-04	1019.3
15 17 37	6	24.02	20.96	381.1	27.24	611.6	1.45E-02	4.75E-04	1019.2
15 18 9	7	23.99	20.86	381.3	27.27	608.6	1.74E-02	4.52E-04	1019.1
15 18 41	15	23.98	20.78	381.3	27.30	596.5	1.23E-02	3.85E-04	1018.9
15 19 13	15	24.00	20.76	381.4	27.31	593.8	1.60E-02	1.27E-03	1018.9
15 19 45	14	24.05	20.82	381.5	27.35	577.3	1.16E-02	1.03E-03	1018.9
15 20 17	18	24.14	20.86	381.7	27.45	592.0	1.33E-02	7.77E-04	1018.8
15 20 49	49	24.07	20.59	381.8	27.51	452.0	6.53E-03	1.14E-03	1017.7
15 21 21	25	23.95	20.61	381.5	27.36	556.5	1.04E-02	7.14E-04	1018.5
15 21 53	31	23.94	20.61	381.3	27.30	567.8	1.09E-02	1.10E-03	1018.3
15 22 25	28	23.92	20.60	381.5	27.33	587.9	1.01E-02	8.29E-04	1018.4
15 22 57	31	23.90	20.59	381.3	27.29	593.3	1.10E-02	1.13E-03	1018.3
15 23 29	70	23.81	20.50	381.1	27.29	573.3	7.13E-03	2.55E-03	1016.9
15 24 1	73	23.74	20.47	381.2	27.29	572.3	5.36E-03	2.19E-03	1016.8
15 24 32	74	23.80	20.39	381.1	27.30	560.9	4.95E-03	2.64E-03	1016.7
15 25 4	76	23.83	20.37	381.1	27.31	539.3	7.01E-03	3.03E-03	1016.7
15 25 36	94	23.76	20.42	381.4	27.40	417.4	4.20E-03	2.83E-03	1016.1
15 26 8	97	23.87	20.35	381.3	27.42	415.6	7.46E-03	3.92E-03	1015.9
15 26 40	100	23.75	20.47	381.1	27.34	508.5	5.35E-03	2.54E-03	1015.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 27 12	96	23.83	20.52	381.1	27.35	525.5	4.63E-03	2.83E-03	1016.0
15 27 44	101	23.94	20.50	381.3	27.45	510.1	6.74E-03	2.63E-03	1015.8
15 28 16	125	23.85	20.46	381.4	27.51	490.7	6.69E-03	3.13E-03	1014.9
15 28 48	140	24.04	20.51	381.6	27.66	449.4	6.94E-03	2.92E-03	1014.4
15 29 20	140	24.03	20.68	381.1	27.52	446.6	9.99E-03	3.76E-03	1014.4
15 29 52	144	24.05	20.62	381.2	27.57	470.0	7.86E-03	3.48E-03	1014.3
15 30 24	144	24.28	20.54	381.4	27.73	470.0	1.13E-02	3.26E-03	1014.3
15 30 56	207	24.03	20.52	381.4	27.76	359.2	4.49E-03	2.33E-03	1012.0
15 31 28	241	24.01	20.52	381.0	27.74	343.7	1.07E-02	5.10E-03	1010.8
15 32 0	243	24.21	20.54	381.0	27.81	376.6	1.02E-02	7.13E-03	1010.8
15 32 32	235	24.25	20.48	380.5	27.69	386.4	7.40E-03	6.15E-03	1011.0
15 33 4	242	24.08	20.48	380.4	27.62	393.4	7.89E-03	5.68E-03	1010.8
15 33 36	262	24.04	20.39	380.4	27.65	383.3	6.24E-03	4.95E-03	1010.1
15 34 8	478	24.30	20.23	378.1	27.67	302.8	5.78E-04	2.36E-03	1002.4
15 34 40	504	24.45	20.30	377.2	27.58	290.7	2.84E-05	5.89E-04	1001.5
15 35 11	511	24.51	20.29	376.8	27.53	287.7	1.23E-04	7.01E-04	1001.3
15 35 43	511	24.46	20.27	377.1	27.57	275.5	3.30E-04	4.39E-04	1001.3
15 36 15	506	24.44	20.32	376.6	27.44	289.6	9.44E-04	8.56E-04	1001.5
15 36 47	586	24.30	20.31	374.2	26.98	243.5	9.15E-04	7.44E-04	998.6
15 37 19	803	23.78	20.24	371.5	26.61	187.3	5.78E-05	1.11E-04	991.0
15 37 51	1094	23.16	20.14	368.7	26.33	273.3	7.46E-05	1.34E-04	980.9
15 38 23	1426	22.28	19.91	365.1	25.86	296.3	9.21E-02	1.00E-01	969.4
15 38 55	1573	22.64	19.92	357.1	24.42	154.3	5.60E-05	1.59E-01	964.4
15 39 27	1798	23.82	20.35	333.8	19.84	82.8	5.71E-06	1.68E-02	956.8
15 39 59	1995	23.90	20.45	328.1	18.92	64.5	4.03E-06	7.31E-04	950.1
15 40 31	2045	23.77	20.41	326.7	18.65	41.8	3.60E-06	3.16E-04	948.4
15 41 3	2050	23.67	20.36	326.5	18.57	53.3	3.25E-06	2.52E-04	948.2
15 41 35	2061	23.57	20.18	326.8	18.65	53.6	4.63E-06	2.92E-04	947.9
15 42 7	2105	23.44	20.01	328.9	19.18	61.1	3.29E-06	2.94E-04	946.4
15 42 39	2049	23.44	19.84	330.3	19.39	63.8	5.25E-06	3.05E-04	948.3
15 43 10	1990	23.15	19.96	333.8	20.04	60.3	7.42E-06	5.25E-04	949.7
15 43 42	2068	23.27	20.02	329.8	19.31	54.2	6.89E-06	3.19E-04	947.1
15 44 14	2070	23.15	20.06	329.3	19.14	48.6	6.93E-06	2.60E-04	947.0
15 44 46	2039	23.18	20.00	328.2	18.84	52.3	4.64E-06	2.25E-04	948.0
15 45 18	2044	23.35	20.10	327.8	18.82	51.1	9.02E-06	2.55E-04	947.9
15 45 50	1930	23.66	20.32	331.9	19.64	67.7	3.19E-06	3.68E-04	951.7

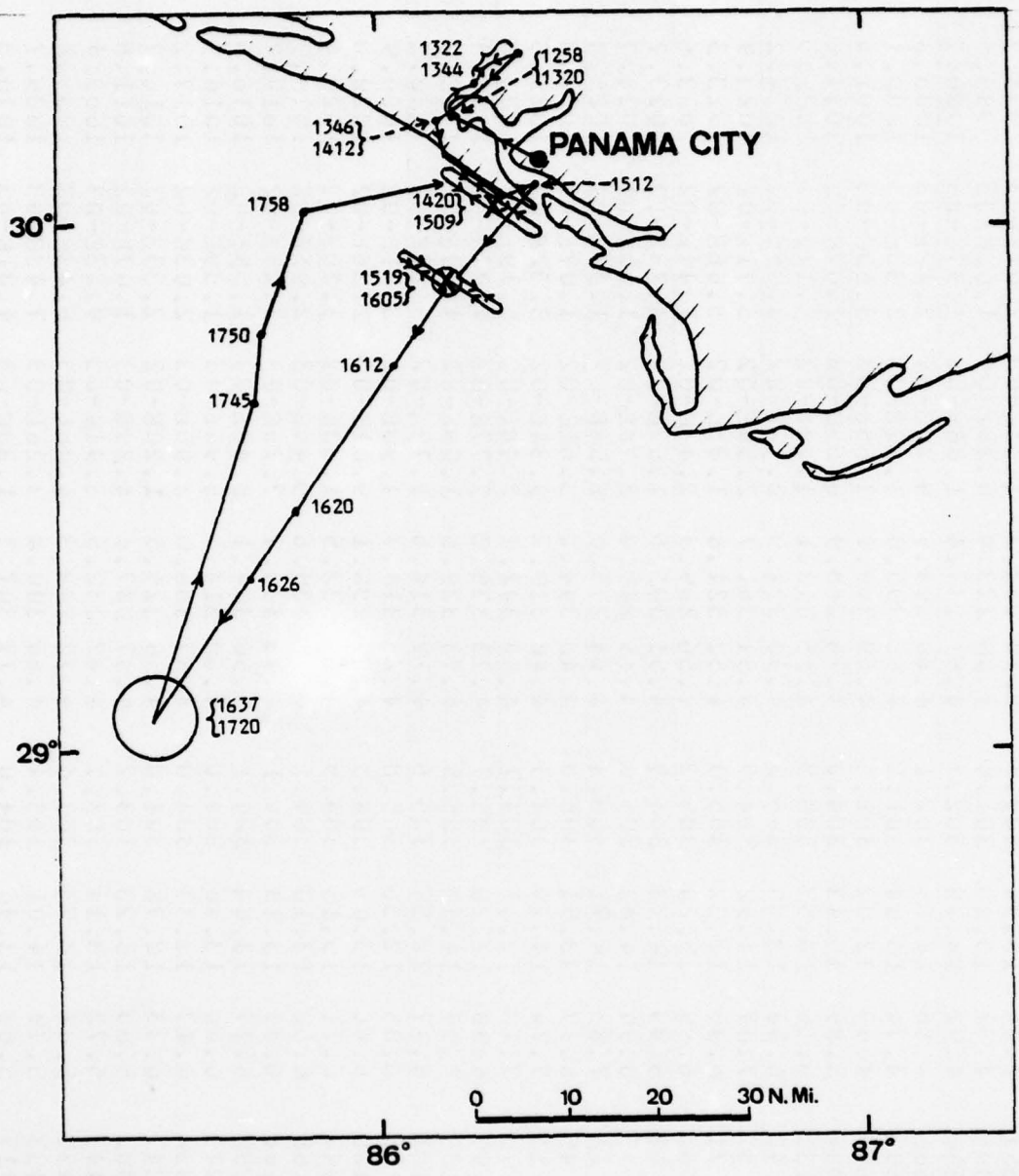
Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 46 22	1683	22.95	20.20	351.2	23.43	113.1	7.96E-06	3.04E-04	960.1
15 46 54	1459	22.80	20.00	358.6	24.64	149.3	2.23E-05	1.78E-04	967.8
15 47 26	1196	23.06	19.99	365.4	25.77	283.9	2.66E-05	1.98E-04	976.8
15 47 58	971	23.51	20.06	369.8	26.50	353.8	1.07E-04	4.18E-04	984.6
15 48 30	805	23.80	20.10	372.3	26.85	352.3	2.42E-04	4.42E-04	990.4
15 49 2	568	24.19	19.94	375.7	27.29	315.4	8.45E-04	1.03E-03	998.7
15 49 34	325	24.42	20.07	377.8	27.35	347.1	2.08E-03	1.23E-03	1007.2
15 50 6	273	24.33	20.18	379.1	27.50	340.9	3.07E-03	1.68E-03	1009.1
15 50 38	281	24.00	20.12	379.7	27.55	387.4	2.73E-03	1.86E-03	1008.8
15 51 9	269	23.97	20.03	380.3	27.64	387.9	2.55E-03	1.20E-03	1009.2
15 51 41	287	23.93	19.97	380.3	27.68	397.6	2.06E-03	7.50E-04	1008.6
15 52 13	293	23.94	20.22	380.4	27.72	365.0	1.66E-03	9.84E-04	1008.4
15 52 45	285	23.91	20.35	380.8	27.77	375.5	1.54E-03	2.34E-03	1008.6
15 53 17	291	23.90	20.23	380.8	27.79	373.8	1.50E-03	5.32E-03	1008.5
15 53 49	286	23.82	20.34	381.5	27.90	371.8	1.74E-03	5.94E-03	1008.6
15 54 21	264	24.00	20.05	381.8	28.00	295.8	2.36E-03	4.18E-03	1009.4
15 54 53	275	24.03	20.10	381.5	27.96	315.2	2.06E-03	3.50E-03	1009.0
15 55 25	279	24.01	20.20	381.0	27.85	372.6	3.43E-03	5.26E-03	1008.9
15 55 57	134	24.22	20.24	381.8	27.80	358.0	2.80E-03	4.47E-03	1014.0
15 56 28	82	24.37	20.36	381.6	27.70	333.7	8.41E-03	2.82E-02	1015.9
15 57 0	74	24.40	20.33	381.8	27.74	492.0	5.21E-03	3.78E-02	1016.2
15 57 32	82	24.33	20.12	382.2	27.83	164.0	5.10E-03	5.05E-03	1015.9
15 58 4	46	24.34	20.34	382.2	27.74	310.2	8.51E-03	4.62E-03	1017.2
15 58 36	0	24.41	20.70	381.8	27.59	579.7	2.02E-02	6.05E-03	1018.8
15 59 8	85	24.45	20.42	381.6	27.74	458.5	5.35E-03	6.03E-03	1015.8
15 59 40	175	24.47	20.36	381.0	27.80	318.2	2.06E-03	3.61E-03	1012.6
16 0 12	111	24.46	20.39	381.4	27.76	470.3	2.93E-03	4.36E-03	1014.8
16 0 44	84	24.44	20.19	381.7	27.75	375.0	4.44E-03	3.88E-03	1015.8
16 1 16	12	24.43	20.58	381.4	27.51	560.4	1.37E-02	4.42E-03	1018.4
16 1 48	7	24.49	20.69	381.2	27.49	603.2	1.32E-02	6.49E-03	1018.5
16 2 20	8	24.44	20.81	380.9	27.39	571.9	1.20E-02	5.53E-03	1018.5
16 2 52	7	24.42	20.76	380.8	27.35	540.8	1.27E-02	4.01E-03	1018.5
16 3 24	12	24.38	20.64	380.8	27.36	578.7	1.27E-02	3.28E-03	1018.4
16 3 56	23	24.41	20.54	381.0	27.43	538.9	8.24E-03	3.65E-03	1018.0
16 4 27	19	24.36	20.48	381.0	27.42	579.6	7.24E-03	4.08E-03	1018.1
16 4 59	18	24.38	20.40	380.9	27.41	581.6	9.66E-03	3.18E-03	1018.2

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 5 31	26	24.46	20.54	381.0	27.47	560.2	7.24E-03	2.75E-03	1017.9
16 6 3	48	24.48	20.55	381.2	27.57	431.4	5.80E-03	1.93E-03	1017.1
16 6 35	30	24.48	20.60	381.2	27.53	576.2	5.19E-03	3.18E-03	1017.7
16 7 7	28	24.45	20.54	381.2	27.52	514.5	6.38E-03	4.58E-03	1017.8
16 7 39	37	24.46	20.58	381.5	27.60	517.5	6.31E-03	3.97E-03	1017.5
16 8 11	31	24.52	20.58	381.3	27.57	529.4	9.18E-03	3.78E-03	1017.7
16 8 43	36	24.49	20.64	381.4	27.59	484.5	6.82E-03	3.66E-03	1017.5
16 9 15	72	24.40	20.45	381.4	27.64	557.5	6.14E-03	3.26E-03	1016.2
16 9 47	70	24.43	20.37	381.4	27.66	548.0	7.70E-03	3.74E-03	1016.3
16 10 19	80	24.36	20.16	381.3	27.63	549.1	4.00E-03	3.81E-03	1016.0
16 10 51	78	24.34	20.19	381.5	27.65	546.7	3.27E-03	3.32E-03	1016.0
16 11 23	100	24.31	20.16	381.6	27.72	415.0	3.12E-03	1.02E-03	1015.2
16 11 55	94	24.40	20.07	381.4	27.69	444.2	2.28E-03	8.94E-04	1015.4
16 12 26	95	24.30	20.07	381.6	27.69	542.6	3.65E-03	1.52E-03	1015.4
16 12 58	86	24.31	20.09	381.8	27.73	545.0	3.64E-03	8.65E-04	1015.7
16 13 30	84	24.35	20.19	381.6	27.68	550.2	4.25E-03	5.69E-04	1015.8
16 14 2	97	24.35	20.42	381.0	27.59	551.3	3.63E-03	7.21E-04	1015.3
16 14 34	121	24.29	20.48	380.8	27.57	551.5	3.37E-03	8.44E-04	1014.5
16 15 6	140	24.39	20.61	380.7	27.62	520.8	4.58E-03	1.97E-03	1013.8
16 15 38	138	24.30	20.49	380.4	27.52	531.6	3.11E-03	1.01E-03	1013.9
16 16 10	136	24.27	20.45	380.5	27.51	546.5	2.70E-03	8.76E-04	1013.9
16 16 42	168	24.16	20.36	380.5	27.56	528.0	2.25E-03	7.82E-04	1012.8
16 17 14	280	24.11	20.31	380.2	27.71	437.5	2.08E-03	1.01E-03	1008.8
16 17 46	292	24.30	20.33	379.9	27.74	401.2	1.37E-03	7.66E-04	1008.4
16 18 18	278	24.35	20.37	379.5	27.63	412.8	2.77E-03	2.00E-03	1008.9
16 18 50	335	24.11	20.35	379.5	27.65	332.0	3.70E-03	2.11E-03	1006.9
16 19 22	485	24.27	20.22	377.7	27.62	296.1	1.54E-03	1.66E-03	1001.6
16 19 54	517	24.54	20.32	376.4	27.49	328.1	6.00E-04	4.36E-04	1000.5
16 20 26	512	24.57	20.34	376.9	27.59	339.1	3.55E-04	3.96E-04	1000.6
16 20 58	521	24.44	20.35	377.0	27.59	345.0	1.40E-03	6.81E-04	1000.3
16 21 30	609	24.32	20.36	374.3	27.10	343.8	2.17E-04	3.67E-04	997.2
16 22 2	781	24.06	20.31	370.6	26.50	275.1	2.02E-05	1.06E-04	991.2
16 22 34	781	24.20	20.30	369.7	26.33	279.2	2.32E-05	1.92E-04	991.2
16 23 5	791	24.20	20.15	370.6	26.56	284.5	4.36E-05	2.17E-04	990.9
16 23 37	788	24.14	20.13	371.2	26.68	296.6	2.81E-05	2.13E-04	991.0
16 24 9	866	23.86	20.03	370.9	26.67	321.4	2.63E-05	2.00E-04	988.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 24 41	1002	23.39	19.96	368.6	26.24	253.3	4.69E-05	8.63E-05	983.5
16 25 13	1029	23.53	20.04	366.7	25.90	206.4	3.09E-05	1.76E-04	982.6
16 25 45	1010	23.66	20.10	367.1	26.00	232.8	2.45E-05	2.41E-04	983.2
16 26 17	1004	23.73	20.32	366.3	25.82	241.8	3.09E-05	1.08E-04	983.4
16 26 49	1023	23.71	20.40	365.2	25.60	230.4	2.73E-05	9.93E-05	982.8
16 27 21	1305	23.04	20.38	361.5	25.09	202.6	3.56E-05	6.30E-05	973.0
16 27 53	1659	22.62	20.16	352.8	23.63	172.6	5.97E-05	2.41E-04	960.9
16 28 27	1907	23.46	20.05	332.2	19.59	90.0	6.32E-06	3.63E-04	952.5
16 28 59	2066	23.44	20.04	328.4	19.02	67.2	4.04E-06	2.35E-04	947.1
16 29 31	2140	23.49	19.75	326.7	18.79	51.2	4.44E-06	2.55E-04	944.6
16 30 3	2145	23.78	19.76	325.8	18.68	59.9	3.75E-06	3.53E-04	944.5
16 30 35	2107	23.66	19.80	326.2	18.66	66.6	3.37E-06	3.56E-04	945.7
16 31 7	2076	23.67	20.16	325.1	18.33	63.8	6.46E-06	4.52E-04	946.8
16 31 39	2070	23.59	20.22	325.3	18.36	59.0	7.99E-06	2.83E-04	947.0
16 32 11	2039	23.87	20.05	324.4	18.17	62.0	3.75E-06	3.06E-04	948.0
16 32 43	1836	23.50	20.09	341.5	21.65	105.6	3.06E-05	4.78E-04	954.9
16 33 15	1363	23.05	20.28	362.0	25.32	291.8	4.75E-05	8.20E-03	971.1
16 33 46	994	23.75	20.34	368.2	26.26	263.9	2.87E-05	1.37E-02	983.8
16 34 18	740	24.38	20.46	372.3	26.93	291.3	1.84E-04	1.35E-02	992.6
16 34 50	368	24.54	20.42	377.6	27.46	395.4	1.24E-03	1.37E-02	1005.7
16 35 22	291	24.26	20.57	379.2	27.55	427.2	1.90E-03	1.41E-02	1008.5
16 35 54	295	24.16	20.48	380.2	27.74	440.6	2.13E-03	1.39E-02	1008.3
16 36 26	304	24.17	20.50	380.5	27.85	454.8	3.93E-03	1.42E-02	1008.0
16 36 58	297	24.11	20.56	380.9	27.90	457.7	6.34E-03	1.42E-02	1008.2
16 37 30	241	24.24	20.59	381.3	27.94	460.7	3.53E-03	1.37E-02	1010.2
16 38 2	202	24.37	20.79	381.7	27.98	460.4	4.62E-03	1.34E-02	1011.6
16 38 34	182	24.30	20.83	382.0	27.99	466.4	2.81E-03	1.34E-02	1012.3
16 39 6	186	24.32	20.59	382.3	28.07	425.6	2.30E-03	1.30E-02	1012.2
16 39 38	199	24.25	20.66	382.4	28.10	469.0	3.92E-03	1.29E-02	1011.7
16 40 10	181	24.36	20.75	382.4	28.10	461.2	2.48E-03	1.31E-02	1012.4
16 40 42	193	24.32	20.80	382.4	28.11	449.8	2.57E-03	1.28E-02	1011.9
16 41 14	189	24.37	20.74	382.5	28.14	428.3	2.85E-03	1.32E-02	1012.1
16 41 46	199	24.39	20.74	382.2	28.11	405.5	3.10E-03	1.35E-02	1011.7
16 42 18	188	24.44	20.68	382.2	28.11	415.0	2.82E-03	1.39E-02	1012.1
16 42 50	198	24.51	20.85	382.1	28.14	404.9	2.98E-03	1.40E-02	1011.8

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 43 22	193	24.26	20.90	382.1	28.01	430.1	4.12E-03	1.34E-02	1011.9
16 43 54	188	24.23	20.79	382.0	27.96	448.2	3.20E-03	1.36E-02	1012.1
16 44 25	203	24.22	20.70	382.1	28.02	461.8	3.14E-03	1.38E-02	1011.6
16 44 57	193	24.16	20.57	381.9	27.94	461.7	4.28E-03	1.35E-02	1011.9
16 45 29	180	24.25	20.55	382.0	27.95	468.6	2.64E-03	1.31E-02	1012.4
16 46 1	209	24.10	20.48	382.0	27.97	456.7	3.68E-03	1.29E-02	1011.4
16 46 33	196	24.26	20.42	382.0	28.00	429.5	4.17E-03	1.39E-02	1011.8
16 47 5	201	24.32	20.44	381.9	28.01	441.2	4.02E-03	6.41E-02	1011.6
16 47 37	193	24.28	20.41	381.9	27.99	457.2	3.84E-03	1.62E-02	1011.9
16 48 9	203	24.33	20.37	381.8	28.00	443.9	3.44E-03	1.57E-02	1011.6
16 48 41	199	24.25	20.33	381.8	27.96	464.5	4.62E-03	1.50E-02	1011.7
16 49 13	112	24.33	20.47	381.8	27.79	527.8	7.21E-03	1.48E-02	1014.8
16 49 45	16	24.24	20.69	382.1	27.62	463.2	9.10E-03	1.45E-02	1018.2
16 50 17	270	24.64	20.50	380.6	27.98	395.1	1.58E-03	1.44E-02	1009.2
16 50 49	645	24.35	20.25	374.9	27.34	174.8	3.67E-05	1.34E-02	996.0
16 51 21	896	23.92	20.14	369.8	26.51	155.7	2.99E-05	1.32E-02	987.2
16 51 53	1118	23.81	20.16	362.2	25.13	126.4	9.31E-06	1.34E-02	979.5
16 52 24	1386	23.91	20.16	353.1	23.58	118.3	9.24E-06	1.34E-02	970.3
16 52 56	1595	24.06	20.11	339.3	20.82	96.4	1.30E-05	1.35E-02	963.1
16 53 28	1838	23.83	20.15	336.6	20.62	87.6	2.97E-05	1.33E-02	954.8
16 54 0	2154	23.14	19.99	335.2	20.71	102.1	8.04E-06	1.34E-02	944.2
16 54 32	2384	23.05	20.01	326.3	19.06	82.9	5.70E-06	1.39E-02	936.5
16 55 4	2733	22.68	19.89	318.7	17.87	56.8	8.69E-06	1.37E-02	924.9
16 55 36	2970	22.31	19.91	317.0	17.84	62.4	6.58E-06	1.38E-02	917.1
16 56 8	3223	21.79	20.06	315.0	17.71	72.4	5.57E-06	1.36E-02	908.8
16 56 40	3519	21.18	20.23	309.8	16.90	73.8	6.80E-06	1.40E-02	899.2
16 57 12	3792	20.61	20.11	304.5	16.04	73.4	8.49E-06	1.45E-02	890.4
16 57 44	4145	20.08	20.06	299.3	15.37	67.8	6.52E-06	1.42E-02	879.2
16 58 16	4466	19.55	20.01	295.8	15.04	68.7	8.07E-06	1.41E-02	869.1
16 58 48	4792	19.12	19.83	286.0	13.29	54.1	6.51E-06	1.40E-02	858.9
16 59 20	5059	18.51	19.87	283.1	12.97	47.5	6.04E-06	1.37E-02	850.6
16 59 52	5142	18.37	19.91	282.3	12.91	48.9	6.61E-06	1.44E-02	848.0
17 0 23	5222	18.39	19.64	283.8	13.40	50.8	2.20E-05	5.53E-02	845.6
17 0 55	5218	18.19	19.63	284.7	13.54	51.7	3.19E-05	2.11E-03	845.7
17 1 27	5116	17.94	19.71	286.3	13.64	55.7	3.25E-05	2.23E-03	848.8

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 1 59	4941	16.82	4.82	258.2	6.69	41.6	5.57E 02	-8.41E-03	854.2
17 2 31	5138	17.59	17.64	287.7	13.90	55.0	7.41E 01	4.98E-02	848.2
17 3 3	5168	17.74	19.29	286.8	13.81	58.4	3.39E-05	2.31E-03	847.2
17 3 35	5165	17.99	19.43	284.3	13.30	55.3	3.63E-05	2.27E-04	847.3
17 4 7	5149	18.07	19.62	284.1	13.23	50.8	3.07E-05	7.90E-05	847.8
17 4 39	5159	17.87	19.59	284.9	13.40	53.1	4.04E-05	1.01E-04	847.5
17 5 11	5127	17.94	19.63	286.0	13.59	56.2	4.42E-05	2.49E-04	848.5
17 5 42	5133	17.71	19.59	288.8	14.18	56.1	5.63E-05	3.73E-04	848.3
17 6 14	5163	17.47	19.54	292.0	14.89	53.5	3.99E-05	2.50E-04	847.4
17 6 46	5150	17.61	19.30	290.1	14.48	48.3	4.08E-05	1.01E-04	847.8
17 7 18	5057	17.73	19.37	293.8	15.18	49.5	2.53E-05	3.86E-04	850.7
17 7 50	4850	18.12	19.58	296.1	15.43	53.6	2.03E-05	1.78E-04	857.1
17 8 22	4618	18.86	19.68	292.4	14.35	56.1	2.70E-05	1.39E-04	864.3
17 8 54	4371	19.45	19.73	296.9	15.07	58.3	2.12E-05	3.62E-04	872.1
17 9 26	4127	19.67	19.63	304.8	16.48	64.1	2.41E-05	2.72E-04	879.8
17 9 58	3868	20.19	19.61	302.8	15.68	63.4	3.09E-05	2.04E-04	888.0
17 10 30	3661	20.49	19.65	307.1	16.34	62.7	3.03E-05	4.25E-04	894.6
17 11 2	3427	21.03	19.66	310.8	16.90	64.8	3.37E-05	5.98E-04	902.2
17 11 34	3206	21.46	19.81	314.4	17.43	65.9	2.30E-05	6.41E-05	909.4
17 12 6	2903	22.10	19.78	316.4	17.48	71.4	2.13E-05	8.31E-05	919.3
17 12 38	2659	22.46	19.65	319.1	17.74	73.9	1.98E-05	1.02E-04	927.3
17 13 10	2405	22.83	19.66	324.9	18.71	85.6	2.16E-05	2.35E-04	935.8
17 13 42	2121	22.77	19.75	339.0	21.40	136.7	9.63E-05	4.52E-04	945.3
17 14 14	1852	22.65	19.76	349.6	23.30	178.6	4.16E-05	2.96E-04	954.4
17 14 46	1540	23.08	19.82	355.5	24.19	186.9	1.69E-05	1.81E-04	965.0
17 15 18	1231	23.61	19.68	361.4	25.12	210.7	5.88E-05	1.22E-04	975.6
17 15 50	937	24.00	19.80	368.4	26.30	271.4	1.02E-04	5.26E-05	985.8
17 16 21	520	24.71	19.72	374.8	27.19	321.2	1.67E-04	1.42E-04	1000.4
17 16 53	176	24.66	19.58	376.9	26.90	371.9	1.80E-03	1.66E-03	1012.5
17 17 25	50	24.19	19.66	377.7	26.63	522.6	4.98E-03	4.48E-03	1017.0
17 17 57	172	24.35	19.46	378.4	27.13	438.9	3.28E-03	2.86E-03	1012.7
17 18 29	498	24.02	19.46	377.4	27.47	304.8	2.50E-04	2.58E-04	1001.1



NOTE: Numbers give time in Central Standard Time

Figure B-8. Flight 8 Flight Track

FLIGHT# 8 10DEC78

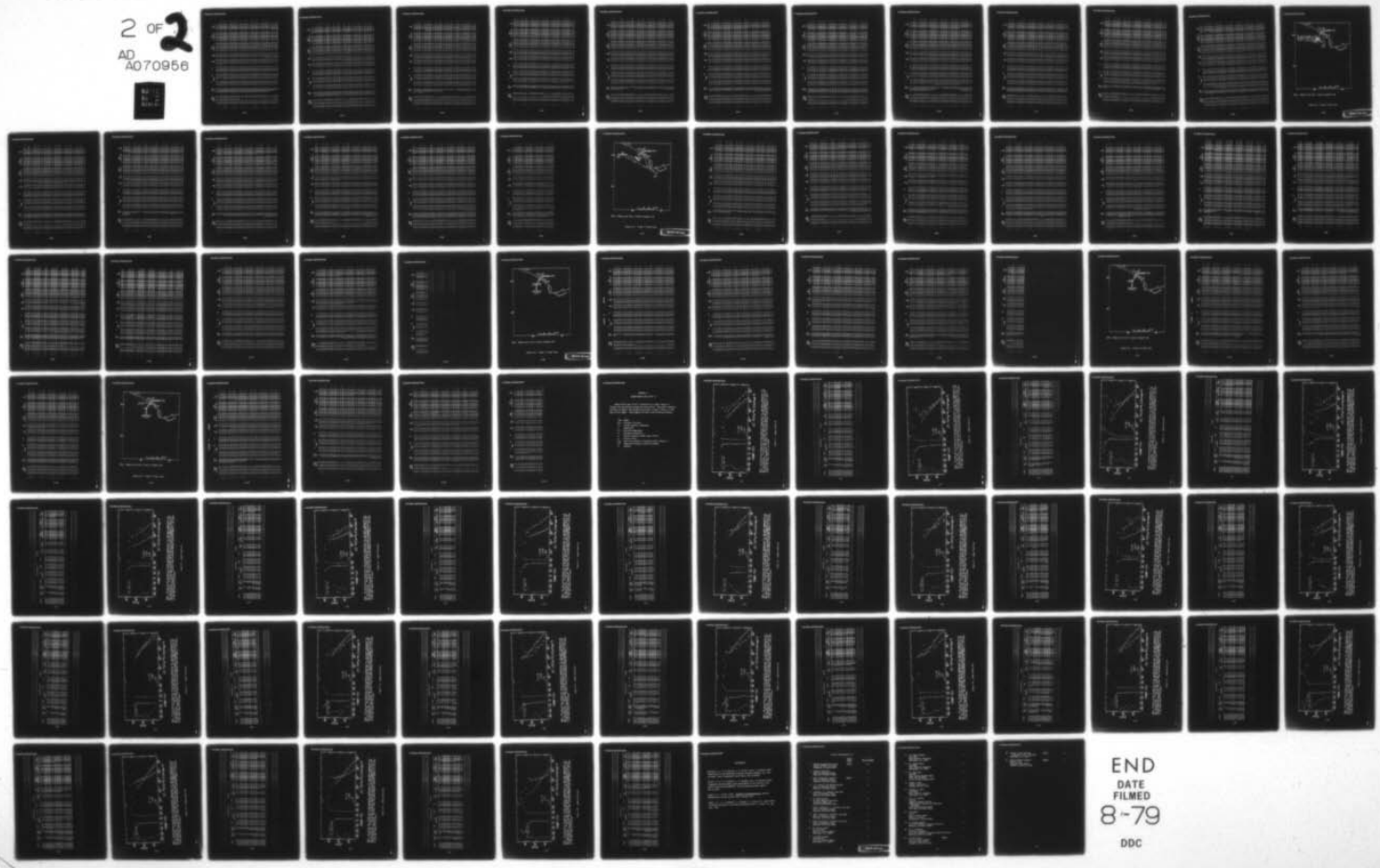
	Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
6	12 54 57	977	3.91	17.68	302.0	5.12	227.0	6.14E-04	9.39E-04	989.6
7	12 55 29	861	4.44	18.94	302.7	5.16	232.2	1.41E-03	1.07E-03	993.9
8	12 56 1	805	4.51	19.23	301.8	4.86	223.4	8.28E-04	1.03E-03	995.9
9	12 56 33	690	4.92	18.75	302.7	4.91	237.4	1.06E-03	1.37E-03	1000.2
10	12 57 5	686	4.56	14.85	302.1	4.68	254.9	9.20E-04	2.42E-03	1000.3
11	12 57 37	692	4.74	13.04	301.2	4.55	300.8	1.62E-03	2.33E-03	1000.1
12	12 58 9	650	4.99	12.02	301.5	4.59	269.7	1.55E-03	3.50E-03	1001.6
13	12 58 41	384	5.89	15.43	304.0	4.75	265.9	6.57E-03	1.07E-02	1011.6
14	12 59 13	132	6.56	16.57	304.9	4.55	318.1	1.48E-02	3.11E-02	1021.0
15	12 59 45	48	6.88	13.80	304.5	4.36	321.9	2.10E-02	3.85E-02	1024.2
16	13 0 17	57	7.07	14.92	304.9	4.51	361.7	2.58E-02	5.71E-02	1023.9
17	13 0 49	71	6.85	14.22	305.0	4.52	324.8	1.35E-02	5.66E-02	1023.3
18	13 1 21	63	6.99	15.20	305.2	4.56	269.8	2.41E-02	7.41E-02	1023.6
19	13 1 53	62	6.99	14.33	304.9	4.51	305.6	1.82E-02	4.78E-02	1023.7
20	13 2 25	35	6.94	14.42	305.0	4.45	289.0	3.28E-02	1.05E-01	1024.7
21	13 2 58	16	7.65	14.71	305.3	4.64	275.0	6.54E-02	1.85E-01	1025.4
22	13 3 30	45	6.97	13.91	305.0	4.48	344.0	3.61E-02	1.07E-01	1024.3
23	13 4 2	13	7.74	14.29	304.3	4.46	310.2	3.34E-02	8.32E-02	1025.5
24	13 4 34	79	7.18	12.81	304.7	4.54	342.4	2.40E-02	5.19E-02	1023.0
25	13 5 6	97	6.90	12.26	305.7	4.73	335.2	2.77E-02	4.27E-02	1022.3
26	13 5 38	100	7.07	14.62	305.5	4.73	328.5	1.09E-02	4.28E-02	1022.2
27	13 6 10	101	6.97	12.56	305.5	4.72	314.6	1.72E-02	3.87E-02	1022.2
28	13 6 42	136	6.85	12.56	305.0	4.65	318.7	1.90E-02	3.81E-02	1020.9
29	13 7 14	160	6.46	13.69	304.8	4.57	296.1	9.61E-03	2.36E-02	1020.0
30	13 7 46	147	6.71	15.15	304.9	4.63	332.5	1.33E-02	3.20E-02	1020.4
31	13 8 18	168	6.52	13.10	304.7	4.58	335.6	9.44E-03	2.95E-02	1019.7
32	13 8 50	166	6.83	13.13	304.1	4.53	335.4	7.75E-03	3.25E-02	1019.7
33	13 9 22	250	6.27	13.84	304.1	4.56	304.1	5.48E-03	1.59E-02	1016.6
34	13 9 54	241	6.60	13.48	304.0	4.60	314.3	5.96E-03	1.39E-02	1016.9
35	13 10 26	234	6.47	12.37	304.0	4.57	306.0	8.90E-03	2.03E-02	1017.2
36	13 10 58	247	6.33	12.78	304.0	4.56	325.5	1.20E-02	2.33E-02	1016.7
37	13 11 30	382	5.83	13.23	303.2	4.57	287.9	4.29E-03	1.07E-02	1011.6
38	13 12 2	443	5.72	13.14	303.2	4.67	282.5	3.91E-03	9.23E-03	1009.4
39	13 12 34	431	5.81	13.75	303.4	4.70	299.3	4.06E-03	5.43E-03	1009.8
40	13 13 6	433	5.79	14.01	303.4	4.69	300.4	3.26E-03	7.43E-03	1009.7
41	13 13 38	417	5.63	13.96	304.0	4.77	307.3	1.39E-03	4.01E-03	1010.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 14 10	609	5.02	13.76	302.6	4.74	286.1	2.82E-03	2.72E-03	1003.2
13 14 42	669	5.12	13.90	301.5	4.66	285.6	4.55E-03	4.01E-03	1000.9
13 15 14	686	4.88	12.80	302.0	4.74	268.8	1.51E-03	3.58E-03	1000.3
13 15 46	654	4.72	13.28	301.7	4.57	275.8	8.99E-04	1.27E-03	1001.5
13 16 18	690	5.14	12.10	301.7	4.75	261.1	4.79E-03	7.28E-03	1000.2
13 16 50	702	5.13	12.86	301.1	4.64	246.3	1.73E-03	3.62E-03	999.7
13 17 22	896	4.36	13.36	300.5	4.75	257.8	1.02E-03	1.70E-03	992.6
13 17 54	905	4.37	16.19	300.2	4.72	254.9	1.94E-03	2.50E-03	992.2
13 18 26	913	4.44	15.78	300.0	4.71	260.5	2.18E-03	2.15E-03	991.9
13 18 58	886	4.27	12.40	300.6	4.73	273.9	1.09E-03	1.33E-03	993.0
13 19 30	938	4.09	12.14	300.5	4.76	273.4	8.77E-04	6.32E-04	991.0
13 20 2	1302	3.06	12.34	299.1	5.01	219.5	2.88E-03	1.04E-03	977.7
13 20 34	1362	2.86	12.27	298.2	4.90	229.7	1.22E-03	1.47E-03	975.5
13 21 6	1373	3.00	12.80	297.8	4.88	224.3	1.89E-03	1.97E-03	975.1
13 21 38	1393	3.02	13.70	296.7	4.68	230.3	9.15E-04	1.19E-03	974.8
13 22 10	1333	3.08	12.94	297.0	4.62	233.7	3.84E-04	4.10E-04	977.0
13 22 42	1210	3.67	12.12	297.7	4.66	259.5	6.69E-04	5.05E-04	981.4
13 23 14	524	5.86	13.79	301.5	4.51	289.0	1.51E-03	3.06E-03	1006.7
13 23 46	162	6.68	13.84	304.4	4.52	219.9	9.07E-03	1.38E-02	1020.3
13 24 18	118	7.04	13.94	302.8	4.18	325.3	7.19E-03	2.29E-02	1021.9
13 24 50	114	6.86	12.66	303.8	4.33	333.6	4.48E-03	1.34E-02	1022.1
13 25 22	125	7.06	13.63	302.8	4.19	372.8	6.02E-03	2.02E-02	1021.7
13 25 54	124	6.81	14.00	302.9	4.14	355.9	4.13E-03	1.86E-02	1021.7
13 26 26	138	6.71	15.40	303.4	4.27	322.1	7.35E-03	1.79E-02	1021.2
13 26 59	127	7.06	14.16	303.4	4.33	234.1	1.57E-02	3.72E-02	1021.6
13 27 31	2	7.46	14.10	304.7	4.41	310.8	5.37E-02	1.85E-01	1026.3
13 28 3	11	7.84	14.26	307.4	5.10	330.9	6.08E-02	2.18E-01	1026.0
13 28 35	81	7.29	12.63	305.7	4.77	279.7	8.94E-03	8.16E-02	1023.4
13 29 7	115	6.70	12.52	304.9	4.52	210.5	4.62E-03	1.61E-02	1022.1
13 29 39	20	7.75	13.87	306.4	4.89	344.9	2.93E-02	1.08E-01	1025.7
13 30 11	16	7.74	13.99	304.6	4.49	341.4	2.97E-02	1.33E-01	1025.8
13 30 43	161	6.77	15.04	304.4	4.54	334.6	5.73E-03	4.06E-02	1020.3
13 31 15	223	6.56	14.73	304.6	4.67	178.4	6.78E-03	1.33E-02	1018.0
13 31 47	59	6.77	13.69	306.7	4.79	307.5	8.50E-03	2.84E-02	1024.2
13 32 19	52	7.13	13.18	305.4	4.61	344.8	1.10E-02	3.84E-02	1024.5
13 32 51	45	7.38	13.45	304.6	4.48	340.4	1.42E-02	5.85E-02	1024.7

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 33 23	144	7.14	13.22	303.9	4.49	189.3	2.90E-03	2.11E-02	1021.0
13 33 55	85	7.10	12.55	304.7	4.51	301.7	9.54E-03	3.04E-02	1023.2
13 34 27	74	7.47	14.04	304.8	4.59	341.9	9.51E-03	2.87E-02	1023.6
13 34 59	62	7.30	14.76	304.3	4.43	359.2	9.39E-03	2.95E-02	1024.1
13 35 31	148	7.20	15.29	303.7	4.46	353.0	1.03E-02	2.82E-02	1020.8
13 36 3	229	6.69	14.32	304.2	4.62	169.2	4.83E-03	1.21E-02	1017.8
13 36 35	153	6.96	14.81	303.3	4.34	346.5	6.06E-03	2.31E-02	1020.6
13 37 7	144	7.00	13.66	303.9	4.46	358.3	3.17E-03	1.05E-02	1021.0
13 37 39	149	7.09	12.50	304.5	4.62	357.3	4.14E-03	1.95E-02	1020.8
13 38 11	155	7.03	12.95	303.4	4.38	347.4	3.18E-03	9.64E-03	1020.5
13 38 43	303	6.62	12.09	302.5	4.41	199.5	2.21E-03	9.14E-03	1015.0
13 39 15	277	6.49	12.58	303.2	4.48	328.9	1.77E-03	4.09E-03	1016.0
13 39 47	291	6.63	12.55	303.3	4.56	343.9	2.02E-03	6.07E-03	1015.4
13 40 19	309	6.40	13.59	303.1	4.50	324.6	2.34E-03	7.19E-03	1014.7
13 40 51	280	6.44	14.06	303.6	4.56	319.2	2.51E-03	3.98E-03	1015.8
13 41 23	396	6.26	13.82	302.7	4.58	265.8	3.41E-03	9.53E-03	1011.5
13 41 55	583	5.66	13.52	302.9	4.87	187.9	2.68E-03	6.14E-03	1004.5
13 42 27	574	5.54	14.57	302.4	4.72	292.0	1.84E-03	3.17E-03	1004.9
13 42 59	600	5.42	13.65	302.6	4.79	289.8	8.49E-04	1.57E-03	1003.9
13 43 31	564	5.82	12.08	302.5	4.79	299.6	1.34E-03	2.03E-03	1005.2
13 44 3	591	5.54	12.14	301.2	4.51	294.4	5.60E-04	7.62E-04	1004.2
13 44 35	757	5.06	12.15	301.0	4.71	299.5	1.17E-03	8.04E-04	998.1
13 45 7	1109	4.17	12.77	298.8	4.79	253.3	1.98E-03	1.41E-03	985.1
13 45 39	1569	2.96	13.00	296.1	4.90	231.6	1.93E-03	2.70E-03	968.4
13 46 11	1846	1.93	12.12	295.1	5.03	214.6	9.30E-04	6.75E-04	958.4
13 46 43	1913	1.56	9.42	196.6	-14.87	207.8	4.17E 01	3.74E-01	956.1
13 47 15	1822	0.90	6.78	194.3	-15.57	217.4	6.04E 01	9.63E-01	959.3
13 47 47	1884	0.16	6.07	238.7	-6.61	218.8	1.03E 02	4.84E-01	957.1
13 48 19	2017	1.22	10.78	291.1	4.40	213.6	1.21E 01	1.10E 00	952.4
13 48 51	1955	0.19	5.95	244.0	-5.41	210.9	1.40E 02	9.12E-01	954.6
13 49 23	2122	1.57	13.03	290.5	4.58	212.4	2.60E-03	3.00E-01	948.6
13 49 55	2111	1.72	11.83	289.9	4.46	143.4	1.71E-03	6.15E-03	949.0
13 50 27	2074	1.88	11.89	289.6	4.36	197.3	1.07E-03	2.28E-03	950.3
13 50 59	2107	1.65	10.79	289.9	4.44	216.5	1.17E-03	1.95E-03	949.2
13 51 31	2146	1.69	12.45	289.6	4.46	187.8	1.34E-03	3.18E-03	947.8
13 52 3	2088	1.93	12.40	254.8	-2.67	170.8	1.21E 01	8.63E-02	949.8

AD-A070 956 BDM CORP MONTEREY CA F/G 4/2
AIRCRAFT MEASUREMENTS OF MICROMETEOROLOGICAL PARAMETERS AT PANA--ETC(U)
APR 79 C W FAIRALL N00014-78-C-0204
UNCLASSIFIED BDM/M-008-79 NL

2 OF 2
AD A070956



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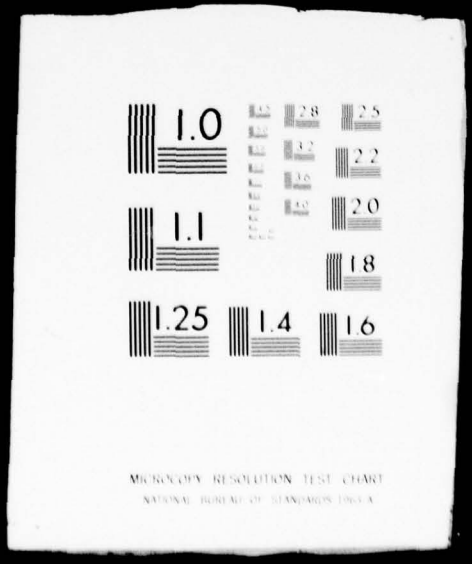


Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 52 35	2277	1.39	11.32	255.6	-2.22	178.7	1.32E 01	8.09E-01	943.1
13 53 7	2550	2.34	10.53	244.4	-3.76	99.5	8.73E 00	5.76E-01	933.5
13 53 39	2726	-0.06	4.36	193.8	-13.94	59.4	2.14E 02	8.18E-01	927.4
13 54 11	2803	1.69	7.65	232.7	-5.74	59.9	1.40E 02	1.28E 00	924.7
13 54 43	2816	2.66	10.41	248.9	-2.27	57.9	2.08E 01	6.15E-01	924.3
13 55 15	2906	3.27	11.68	236.3	-4.55	64.2	1.19E 01	5.08E-01	921.1
13 55 47	2876	3.09	11.54	271.1	2.47	57.8	1.92E-04	1.65E-02	922.2
13 56 19	2845	3.01	11.18	271.7	2.51	55.3	1.27E-04	2.48E-03	923.2
13 56 51	2834	2.39	11.20	274.1	2.86	52.4	5.74E-03	5.15E-02	923.6
13 57 23	2814	2.94	11.01	272.9	2.68	50.3	2.90E-04	7.91E-03	924.3
13 57 55	2854	2.76	11.91	272.4	2.63	28.4	6.41E-04	8.80E-03	922.9
13 58 27	2877	3.40	11.15	271.1	2.55	68.2	3.73E-04	8.28E-03	922.1
13 58 59	2934	2.85	11.95	271.1	2.54	50.8	1.27E-04	2.96E-03	920.1
13 59 31	3114	4.04	12.27	268.4	2.58	39.6	1.32E-04	4.75E-03	913.9
14 0 3	3556	4.78	10.14	261.8	2.25	42.8	9.40E-06	1.03E-03	898.8
14 0 35	3905	4.96	11.26	258.2	2.23	50.9	6.56E-06	3.78E-04	887.0
14 1 7	4227	4.95	10.70	254.7	2.12	53.3	4.23E-06	2.84E-04	876.2
14 1 39	4623	5.07	10.46	250.7	2.07	46.8	4.61E-06	2.53E-04	863.2
14 2 11	4849	4.96	10.69	248.5	2.02	44.5	7.56E-04	2.50E-04	855.8
14 2 43	4862	4.93	11.58	247.9	1.91	43.8	4.47E-05	1.38E-04	855.3
14 3 15	4819	5.02	11.55	248.6	2.01	44.5	1.78E-05	1.83E-04	856.7
14 3 47	4769	4.99	11.09	249.0	1.99	45.2	1.82E-05	1.91E-04	858.4
14 4 19	4790	4.98	10.94	249.2	2.06	38.3	2.31E-05	1.51E-04	857.7
14 4 51	4424	4.66	10.78	252.9	2.08	51.0	2.26E-05	4.04E-04	869.7
14 5 23	3858	4.93	11.00	258.1	2.11	39.8	4.58E-06	3.17E-04	888.6
14 5 55	3374	4.55	10.93	264.0	2.30	21.4	1.80E-05	1.55E-03	905.0
14 6 27	2862	2.83	11.04	272.1	2.60	18.8	6.30E-04	9.21E-03	922.7
14 6 59	2369	1.04	11.32	287.5	4.34	80.9	5.01E-04	5.33E-03	939.9
14 7 31	1971	1.78	12.71	291.3	4.48	130.6	6.29E-04	1.90E-03	954.0
14 8 3	1619	2.83	12.05	294.6	4.68	174.0	6.66E-04	8.73E-04	966.6
14 8 35	1257	3.70	11.39	296.1	4.43	206.9	6.54E-04	5.20E-04	979.7
14 9 7	816	4.84	10.47	298.1	4.17	237.9	1.50E-04	3.32E-04	995.9
14 9 39	444	5.94	10.76	300.2	4.08	262.0	1.70E-03	4.44E-03	1009.7
14 10 11	220	6.66	10.04	301.5	4.03	273.4	2.69E-03	5.53E-03	1018.1
14 10 43	64	7.45	10.64	302.1	4.00	296.9	1.92E-02	1.65E-02	1024.0
14 11 15	-8	7.83	12.05	302.1	3.94	320.2	2.02E-02	4.67E-02	1026.7

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 11 47	50	7.70	11.50	301.4	3.89	323.5	1.93E-02	4.18E-02	1024.5
14 22 59	4731	5.42	19.78	249.8	2.04	32.3	1.11E-02	2.35E-01	861.8
14 23 31	4782	5.52	19.83	249.1	2.00	39.5	3.20E-06	4.33E-03	860.1
14 24 3	4749	5.60	20.00	249.4	2.02	41.2	2.05E-06	3.50E-04	861.2
14 24 35	4753	5.45	19.99	249.8	2.08	44.7	2.34E-06	2.39E-04	861.1
14 25 7	4765	5.79	20.01	248.9	1.99	45.4	2.46E-06	2.61E-04	860.7
14 25 39	4822	5.56	20.20	249.0	2.06	42.5	2.09E-06	3.77E-04	858.8
14 26 11	4890	5.66	20.69	249.0	2.21	48.3	2.32E-06	2.36E-04	856.6
14 26 43	4774	5.64	20.38	249.5	2.09	47.2	2.19E-06	1.93E-04	860.4
14 27 15	4575	5.30	20.38	252.3	2.23	42.1	1.97E-06	2.18E-04	866.9
14 27 47	4260	4.91	20.34	255.5	2.22	48.9	1.75E-06	1.51E-04	877.4
14 28 19	3920	4.45	20.12	260.1	2.42	55.9	2.16E-06	2.25E-04	888.8
14 28 51	3648	4.58	20.03	263.4	2.59	37.9	3.68E-06	2.19E-04	898.0
14 29 23	3345	4.56	20.17	266.2	2.56	30.5	3.39E-06	2.11E-04	908.3
14 29 55	3060	4.47	20.19	268.9	2.54	32.8	1.35E-05	1.21E-03	918.1
14 30 27	2795	3.21	20.18	273.8	2.75	28.0	2.18E-05	1.35E-03	927.3
14 30 59	2499	2.05	20.31	282.3	3.65	61.1	1.52E-04	4.40E-03	937.7
14 31 31	2356	1.24	20.46	290.1	4.75	128.3	8.92E-04	7.09E-03	942.7
14 32 3	2458	2.25	20.58	285.4	4.29	137.4	6.31E-04	6.44E-03	939.1
14 32 35	2527	1.46	21.01	290.0	5.13	146.4	8.02E-04	2.93E-03	936.7
14 33 7	2533	1.82	21.13	285.7	4.35	146.2	4.29E-04	5.90E-03	936.5
14 33 39	2489	2.85	21.15	280.4	3.42	103.6	9.35E-04	1.83E-02	938.0
14 34 11	2300	1.99	21.15	288.6	4.50	157.6	5.01E-04	4.74E-03	944.7
14 34 43	2030	2.52	21.36	291.2	4.62	205.7	6.79E-04	1.02E-03	954.3
14 35 15	1951	2.85	21.32	291.8	4.64	193.3	7.07E-04	5.55E-04	957.1
14 35 47	1901	3.02	21.20	291.2	4.46	181.9	6.35E-04	8.49E-04	958.9
14 36 19	1867	2.90	21.18	292.0	4.52	206.5	7.76E-04	1.52E-03	960.1
14 36 51	1916	2.52	21.08	292.3	4.62	223.6	1.12E-03	1.24E-03	958.4
14 37 23	1965	2.50	20.89	292.6	4.64	217.4	8.99E-04	1.73E-03	956.6
14 37 55	1769	3.17	21.02	293.4	4.72	226.2	1.07E-03	9.33E-04	962.9
14 38 27	1512	3.83	21.08	294.3	4.48	255.0	9.79E-04	1.41E-03	973.0
14 38 59	1403	4.20	21.16	294.5	4.38	261.0	1.02E-03	1.83E-03	976.9
14 39 31	1465	3.83	20.92	294.6	4.44	254.5	1.14E-03	1.52E-03	974.6
14 40 3	1476	3.74	20.84	294.4	4.40	254.3	1.14E-03	8.61E-04	974.2
14 40 35	1439	3.99	20.91	295.0	4.51	239.8	2.06E-03	1.87E-03	975.6
14 41 7	1223	4.52	20.95	295.9	4.35	275.0	5.46E-04	1.50E-03	983.4

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 41 39	1022	5.16	21.18	297.6	4.44	291.1	1.59E-03	2.22E-03	990.8
14 42 11	990	5.12	21.28	296.9	4.21	303.0	5.77E-04	8.97E-04	992.0
14 42 43	970	5.38	21.21	297.7	4.41	294.9	1.20E-03	2.32E-03	992.7
14 43 15	1074	5.39	20.92	297.2	4.52	289.2	1.67E-03	5.99E-03	988.9
14 43 47	1045	5.50	20.94	297.4	4.54	287.3	2.70E-03	1.09E-02	990.0
14 44 19	1032	5.31	21.03	297.5	4.47	293.4	1.14E-03	3.10E-03	990.5
14 44 51	892	5.54	21.01	298.3	4.41	302.9	1.72E-03	2.65E-03	995.6
14 45 23	731	6.20	21.32	298.8	4.31	319.0	9.02E-04	1.84E-03	1001.6
14 45 55	761	6.18	21.04	298.6	4.33	300.6	1.89E-03	3.69E-03	1000.5
14 46 27	727	6.22	20.87	298.1	4.18	288.4	5.81E-04	1.27E-03	1001.7
14 46 59	704	6.19	20.73	298.4	4.18	319.4	7.76E-04	1.07E-03	1002.6
14 47 31	630	6.33	20.28	301.1	4.62	252.3	1.68E-03	1.95E-03	1005.3
14 48 3	543	6.74	20.35	300.8	4.46	283.2	1.90E-03	5.64E-03	1008.6
14 48 35	521	6.77	20.64	299.3	4.11	328.7	2.17E-04	1.32E-03	1009.4
14 49 7	513	7.02	20.64	300.7	4.43	323.4	2.51E-03	3.83E-03	1009.7
14 49 39	557	6.67	20.68	300.6	4.44	315.3	1.02E-03	2.94E-03	1008.0
14 50 11	282	7.95	21.05	303.0	4.65	351.8	3.31E-03	1.61E-02	1018.3
14 50 43	13	8.86	21.65	305.3	4.75	370.0	4.66E-02	2.08E-01	1028.5
14 51 15	9	9.03	21.60	306.2	5.00	378.5	4.54E-02	2.88E-01	1028.7
14 51 47	6	9.32	21.48	305.7	4.94	368.1	4.76E-02	2.81E-01	1028.8
14 52 19	-1	9.14	21.43	307.4	5.26	367.9	5.42E-02	2.96E-01	1029.0
14 52 51	4	8.82	21.22	307.7	5.26	359.8	3.17E-02	2.42E-01	1028.9
14 53 23	13	8.81	20.94	307.3	5.17	395.0	1.44E-02	1.07E-01	1028.5
14 53 55	7	8.64	20.97	307.5	5.16	377.4	2.55E-02	1.86E-01	1028.7
14 54 27	9	8.78	20.97	305.9	4.87	394.7	1.78E-02	1.25E-01	1028.7
14 54 59	15	9.03	20.74	306.8	5.14	364.8	1.46E-02	1.10E-01	1028.4
14 55 31	46	8.42	20.52	305.2	4.72	254.7	6.58E-03	5.87E-02	1027.3
14 56 3	33	8.58	20.65	306.4	4.98	357.3	1.17E-02	8.20E-02	1027.8
14 56 35	30	8.65	20.78	307.3	5.19	390.6	9.19E-03	8.74E-02	1027.9
14 57 7	23	8.61	20.88	306.1	4.89	391.9	1.36E-02	1.07E-01	1028.1
14 57 39	31	8.43	20.92	306.2	4.89	385.1	6.73E-03	6.91E-02	1027.8
14 58 11	43	8.54	20.84	306.4	4.99	416.4	9.15E-03	8.64E-02	1027.4
14 58 43	57	8.31	20.66	305.5	4.76	387.3	5.31E-03	4.83E-02	1026.8
14 59 15	54	8.37	20.74	304.7	4.60	384.2	4.81E-03	4.64E-02	1026.9
14 59 47	53	8.34	20.85	305.7	4.31	389.3	4.85E-03	4.02E-02	1027.0
15 0 19	55	8.40	20.79	305.7	4.82	390.0	6.04E-03	6.02E-02	1026.9

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 0 51	64	8.49	20.65	305.3	4.80	403.2	7.83E-03	4.45E-02	1026.6
15 1 23	90	8.54	20.53	305.1	4.82	396.6	2.99E-03	2.81E-02	1025.6
15 1 55	108	8.23	20.34	304.7	4.70	365.2	2.80E-03	2.31E-02	1024.9
15 2 27	133	8.53	20.23	304.8	4.85	385.5	2.61E-03	2.21E-02	1024.0
15 2 59	159	8.73	20.28	305.1	5.01	390.3	2.92E-03	2.40E-02	1023.0
15 3 31	165	8.70	20.07	304.2	4.82	389.3	4.20E-03	3.09E-02	1022.7
15 4 3	144	8.53	19.64	303.4	4.57	368.0	2.59E-03	2.53E-02	1023.6
15 4 35	164	8.40	19.85	302.6	4.46	228.5	2.23E-03	1.43E-02	1022.1
15 5 7	176	8.36	20.18	302.4	4.39	361.6	1.01E-03	6.47E-03	1022.3
15 5 39	198	8.19	20.51	302.9	4.51	375.8	2.29E-03	1.39E-02	1021.5
15 6 11	192	8.24	20.52	304.0	4.73	398.4	2.05E-03	1.21E-02	1021.8
15 6 43	201	8.07	20.67	303.2	4.55	376.3	1.40E-03	1.01E-02	1021.4
15 7 15	282	7.84	20.50	302.8	4.58	360.6	1.24E-03	5.82E-03	1018.3
15 7 47	302	7.71	20.61	303.3	4.70	369.4	1.96E-03	5.57E-03	1017.6
15 8 19	292	7.81	20.89	303.5	4.74	346.2	1.37E-03	6.88E-03	1018.0
15 8 51	294	7.62	20.78	303.7	4.74	345.8	1.86E-03	1.19E-02	1017.9
15 9 23	358	7.53	20.51	303.6	4.84	285.9	2.51E-03	2.66E-02	1015.5
15 9 55	347	7.49	20.46	303.0	4.68	341.2	2.70E-03	1.14E-02	1015.9
15 10 27	348	7.58	20.44	302.3	4.55	350.3	1.27E-03	5.65E-03	1015.9
15 11 0	421	7.70	12.71	301.1	4.46	327.2	2.04E-03	2.69E-03	1013.7
15 11 32	423	7.70	12.29	300.8	4.39	330.3	1.23E-03	2.40E-03	1013.7
15 12 4	388	7.89	14.81	299.9	4.17	349.5	8.16E-04	2.53E-03	1015.0
15 12 36	187	8.49	19.46	301.6	4.23	259.8	1.62E-03	4.70E-03	1022.5
15 13 8	209	8.53	19.82	302.1	4.40	344.9	1.68E-03	7.47E-03	1021.7
15 13 42	217	8.63	17.93	301.6	4.34	346.0	1.13E-03	5.33E-03	1021.4
15 14 14	233	8.57	19.55	301.9	4.43	349.4	2.55E-03	6.82E-03	1020.8
15 14 46	230	8.83	20.89	302.4	4.59	362.9	2.90E-03	1.73E-02	1020.9
15 15 18	212	8.81	21.10	302.1	4.47	378.4	3.50E-03	1.71E-02	1021.6
15 15 50	204	8.78	21.36	303.0	4.64	388.0	2.59E-03	1.10E-02	1021.9
15 16 22	183	9.00	21.46	304.0	4.87	401.5	3.28E-03	2.37E-02	1022.7
15 16 54	194	8.81	21.48	305.0	5.05	404.9	1.82E-03	1.11E-02	1022.3
15 17 26	203	8.62	21.51	303.7	4.75	394.1	2.16E-03	1.06E-02	1021.9
15 17 58	222	8.71	21.48	304.5	4.98	392.6	2.80E-03	2.10E-02	1021.2
15 18 30	187	8.67	21.45	305.1	5.03	400.7	1.53E-03	1.62E-02	1022.5
15 19 1	130	8.71	21.28	306.0	5.09	399.0	4.64E-03	3.03E-02	1024.7

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 19 33	118	8.74	21.13	306.9	5.27	372.1	4.12E-03	3.42E-02	1025.1
15 20 5	143	8.86	20.94	308.2	5.65	407.3	4.60E-03	2.32E-02	1024.2
15 20 37	167	8.72	21.02	306.3	5.25	324.7	6.07E-03	3.36E-02	1023.3
15 21 9	152	8.64	21.00	305.1	4.94	329.8	1.89E-03	1.29E-02	1023.9
15 21 41	148	8.69	20.96	306.3	5.21	345.0	3.41E-03	2.53E-02	1024.0
15 22 13	129	9.00	20.91	308.7	5.74	344.1	2.68E-03	9.06E-03	1024.7
15 22 45	161	8.88	20.92	306.6	5.35	353.7	3.49E-03	2.62E-02	1023.5
15 23 17	53	9.14	20.94	308.3	5.53	398.3	1.27E-02	7.90E-02	1027.6
15 23 49	22	9.37	21.11	309.1	5.69	426.5	3.06E-02	1.95E-01	1028.8
15 24 21	11	9.39	21.16	308.4	5.51	398.6	4.57E-02	2.38E-01	1029.2
15 24 53	7	9.42	20.99	309.0	5.64	385.8	3.77E-02	2.67E-01	1029.3
15 25 25	7	9.51	21.01	310.8	6.06	399.5	7.31E-02	3.47E-01	1029.4
15 25 57	4	9.77	21.02	309.0	5.74	393.5	5.13E-02	3.38E-01	1029.4
15 26 29	24	9.28	20.78	313.2	6.55	391.6	1.85E-02	1.68E-01	1028.7
15 27 1	32	9.01	20.88	308.3	5.46	404.0	1.26E-02	8.54E-02	1028.4
15 27 33	26	9.37	21.05	311.4	6.19	404.6	1.89E-02	1.23E-01	1028.6
15 28 5	25	9.27	21.07	313.5	6.60	405.5	1.77E-02	1.61E-01	1028.7
15 28 37	24	9.30	21.07	310.9	6.07	420.6	1.86E-02	1.32E-01	1028.7
15 29 9	23	9.36	21.11	313.9	6.72	411.3	1.61E-02	1.30E-01	1028.5
15 29 41	22	9.45	21.14	314.5	6.87	403.8	1.69E-02	1.06E-01	1028.8
15 30 13	44	9.11	21.09	310.3	5.94	388.6	1.17E-02	8.97E-02	1027.9
15 30 45	49	8.98	21.15	309.4	5.72	404.8	1.12E-02	8.07E-02	1027.7
15 31 17	42	9.19	21.17	310.4	5.96	416.6	1.12E-02	8.29E-02	1028.0
15 31 49	47	9.34	21.20	310.7	6.08	438.7	2.33E-02	1.28E-01	1027.8
15 32 21	46	9.17	21.15	310.0	5.89	431.1	6.25E-03	5.09E-02	1027.8
15 32 53	81	9.08	21.07	312.5	6.48	267.4	4.56E-03	2.74E-02	1026.5
15 33 25	69	9.01	21.28	310.5	6.00	394.1	5.75E-03	4.66E-02	1027.0
15 33 57	71	9.12	21.22	311.1	6.16	399.5	5.62E-03	4.26E-02	1026.9
15 34 29	71	9.22	21.15	309.4	5.83	415.0	7.12E-03	4.57E-02	1026.9
15 35 1	69	8.90	21.03	315.2	6.98	408.7	6.19E-03	5.79E-02	1027.0
15 35 33	69	9.08	20.88	307.5	5.38	430.2	1.14E-02	6.47E-02	1027.0
15 36 5	105	8.83	20.79	307.1	5.31	401.1	5.53E-03	2.71E-02	1025.6
15 36 37	114	8.91	20.78	307.1	5.35	415.2	5.25E-03	3.44E-02	1025.3
15 37 9	109	8.74	20.84	305.8	5.03	377.6	2.14E-03	2.19E-02	1025.5
15 37 41	108	8.77	20.81	307.9	5.48	394.8	5.09E-03	3.70E-02	1025.5
15 38 13	154	8.52	20.84	306.0	5.12	285.3	2.66E-03	2.13E-02	1023.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 38 45	185	8.43	20.76	306.5	5.27	335.1	1.74E-03	1.06E-02	1022.6
15 39 17	209	8.45	20.88	305.4	5.09	382.2	2.60E-03	1.57E-02	1021.7
15 39 49	209	8.50	20.88	306.5	5.33	384.5	2.90E-03	1.63E-02	1021.7
15 40 21	196	8.57	20.90	305.1	5.02	373.6	2.24E-03	1.55E-02	1022.2
15 40 53	174	8.55	20.77	306.3	5.23	362.8	1.85E-03	9.14E-03	1023.0
15 41 25	272	8.12	20.77	304.8	5.02	296.2	2.53E-03	9.51E-03	1019.3
15 41 57	315	8.09	20.65	306.3	5.43	282.6	2.87E-03	1.26E-02	1017.7
15 42 29	299	8.34	20.79	305.9	5.36	361.1	1.79E-03	5.37E-03	1018.3
15 43 1	339	8.15	20.94	304.5	5.11	378.6	2.71E-03	1.01E-02	1016.8
15 43 33	308	8.13	21.09	303.9	4.90	363.8	2.21E-03	8.41E-03	1018.0
15 44 5	486	7.73	21.04	303.9	5.19	257.0	1.87E-03	5.21E-03	1011.3
15 44 37	461	7.68	21.14	304.0	5.14	298.7	2.04E-03	6.75E-03	1012.2
15 45 9	485	7.59	21.01	303.3	5.03	345.2	9.02E-04	3.56E-03	1011.3
15 45 41	573	7.73	20.93	302.7	5.14	343.7	1.47E-03	5.16E-03	1008.0
15 46 13	604	7.71	20.88	303.2	5.30	344.6	9.76E-04	3.02E-03	1006.9
15 46 45	637	7.49	21.02	303.1	5.30	343.4	1.65E-03	2.85E-03	1005.7
15 47 17	592	7.50	21.11	301.8	4.93	336.4	2.10E-03	5.39E-03	1007.3
15 47 49	730	6.82	20.92	300.3	4.75	227.9	8.34E-04	2.11E-03	1002.2
15 48 21	760	6.67	21.08	301.8	5.08	295.3	1.01E-03	1.47E-03	1001.1
15 48 53	725	7.00	21.08	302.4	5.21	314.6	2.41E-03	5.23E-03	1002.4
15 49 25	736	6.87	20.95	301.3	4.99	323.9	1.10E-03	2.97E-03	1002.0
15 49 57	755	6.77	20.94	302.1	5.16	307.5	1.78E-03	1.96E-03	1001.3
15 50 29	944	5.96	20.76	301.2	5.17	306.3	1.03E-03	2.10E-03	994.3
15 51 1	980	5.88	20.75	300.2	5.03	295.6	8.77E-04	1.13E-03	993.0
15 51 33	989	6.03	20.91	300.5	5.15	289.8	1.71E-03	1.53E-03	992.6
15 52 5	972	6.16	21.16	301.0	5.24	292.5	8.58E-04	1.44E-03	993.2
15 52 37	984	6.06	21.19	299.7	4.97	292.2	1.01E-03	5.46E-04	992.8
15 53 9	1206	5.55	20.90	297.4	4.84	222.6	6.43E-04	8.07E-04	984.6
15 53 41	1735	4.11	20.73	294.2	4.95	197.6	8.31E-04	1.78E-03	965.4
15 54 13	1942	3.28	20.47	295.4	5.43	195.9	1.13E-03	2.19E-03	958.0
15 54 45	1964	3.11	20.54	296.2	5.60	190.8	1.15E-03	7.74E-04	957.2
15 55 17	1965	3.26	20.46	295.3	5.45	200.9	1.31E-03	1.11E-03	957.2
15 55 49	1960	3.42	20.78	294.6	5.34	202.1	1.07E-03	1.14E-03	957.4
15 56 21	2337	3.27	20.66	286.2	4.36	157.3	1.04E-03	5.69E-03	944.0
15 56 53	2855	4.61	20.22	272.0	2.78	57.0	9.06E-05	5.09E-03	925.8
15 57 25	2990	4.67	20.17	269.3	2.49	55.3	1.45E-05	1.53E-03	921.1

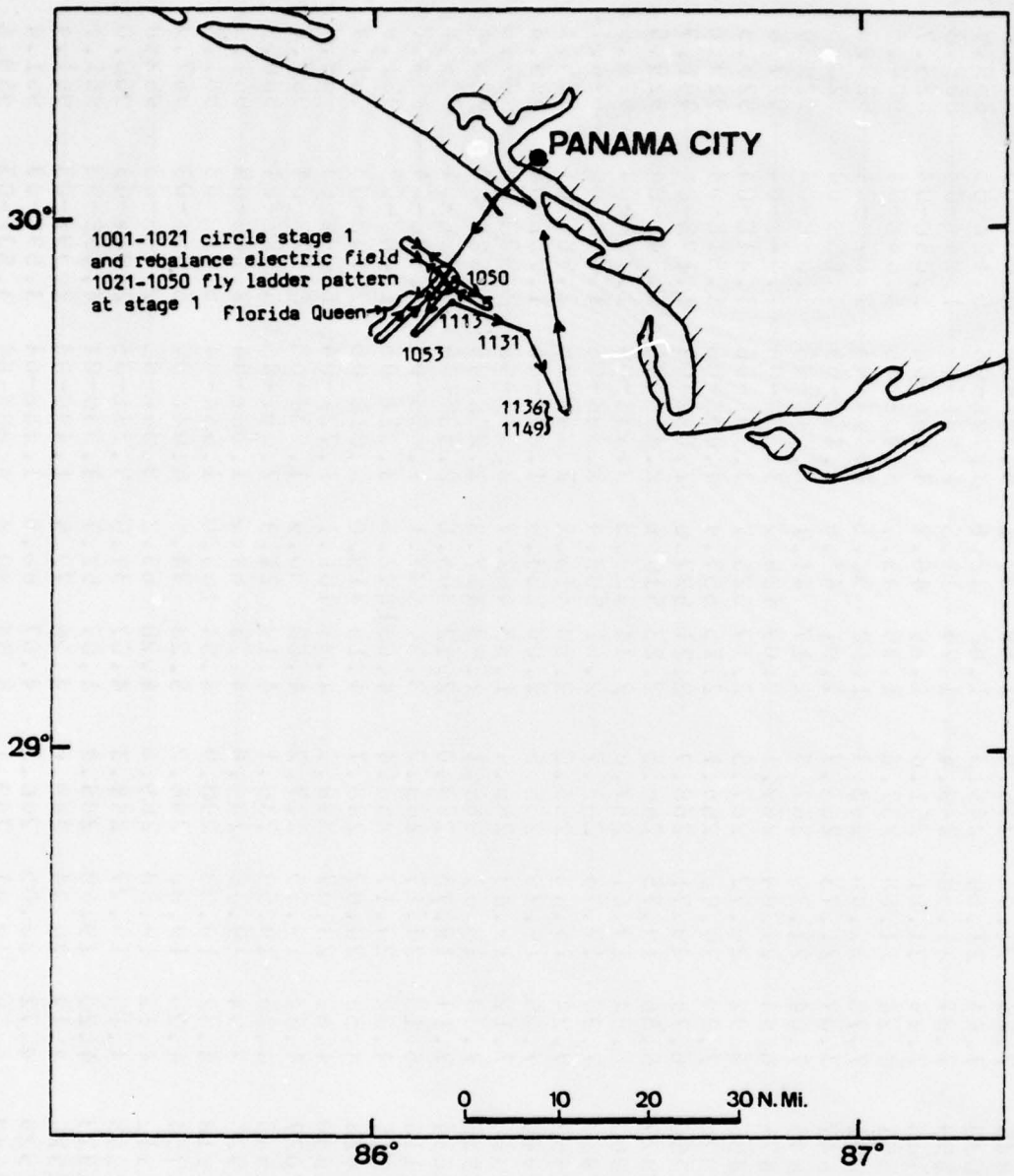
Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 57 57	2920	4.29	20.60	269.4	2.29	47.8	3.37E-05	1.33E-03	923.5
15 58 29	2888	4.04	20.72	270.5	2.41	38.1	1.76E-05	9.06E-04	924.6
15 59 1	2943	4.25	20.59	269.4	2.35	43.1	2.00E-05	9.65E-04	922.7
15 59 33	2886	4.21	20.79	270.4	2.43	42.6	8.55E-05	2.48E-03	924.7
16 0 5	3128	5.08	20.59	266.7	2.32	45.3	9.90E-06	1.03E-03	916.3
16 0 37	3681	5.76	20.10	260.2	2.21	45.3	4.38E-06	3.48E-04	897.4
16 1 9	3876	5.60	19.98	257.8	2.05	48.1	2.16E-06	1.10E-04	890.8
16 1 41	3890	5.64	20.40	257.6	2.05	45.2	1.74E-06	1.62E-04	890.3
16 2 13	3931	5.64	20.48	257.2	2.06	42.7	1.79E-06	1.85E-04	888.9
16 2 45	3956	5.67	20.66	257.0	2.07	42.2	1.73E-06	1.46E-04	888.1
16 3 17	3841	5.71	20.85	257.1	1.87	46.7	1.80E-06	1.59E-04	891.9
16 3 49	3890	5.61	20.79	257.2	1.97	41.6	2.25E-06	1.31E-04	890.3
16 4 21	4332	5.96	20.53	252.5	1.91	40.8	2.88E-06	1.97E-04	875.5
16 4 53	4774	6.59	20.34	248.1	1.96	55.2	6.47E-06	5.07E-04	860.9
16 5 25	4889	6.60	20.39	245.7	1.68	67.0	2.58E-06	4.00E-04	857.1
16 5 57	4805	6.71	20.47	245.9	1.58	51.5	2.44E-06	2.46E-04	859.8
16 6 29	4798	6.59	20.38	245.8	1.52	53.6	2.02E-06	2.04E-04	860.1
16 7 1	4819	6.41	20.20	246.6	1.69	44.9	3.01E-06	3.02E-04	859.4
16 7 33	4815	6.65	20.28	245.5	1.51	41.1	4.56E-06	2.18E-04	859.5
16 8 5	4907	6.79	20.70	244.5	1.49	50.9	2.70E-06	1.63E-04	856.5
16 8 37	4967	7.23	20.84	243.4	1.45	51.8	2.21E-06	1.15E-04	854.6
16 9 9	4932	7.45	20.78	243.0	1.35	50.1	4.14E-05	5.47E-04	855.7
16 9 41	4810	7.82	20.99	243.5	1.33	45.3	4.05E-06	2.31E-03	859.1
16 10 13	4812	7.85	21.10	243.4	1.31	42.3	3.80E-06	1.87E-03	859.0
16 10 45	4777	8.03	21.13	243.1	1.21	43.4	5.11E-06	2.25E-03	860.2
16 11 17	4767	7.84	21.12	243.8	1.32	42.5	3.93E-06	2.65E-03	860.5
16 11 49	4791	7.97	21.30	243.3	1.27	42.3	3.81E-06	2.67E-03	859.7
16 12 21	4748	7.57	21.88	244.4	1.36	39.7	6.77E-06	4.00E-03	861.1
16 12 53	4747	7.86	22.02	244.6	1.45	41.4	4.93E-06	3.60E-03	861.2
16 13 25	4791	7.92	22.16	244.2	1.45	43.7	5.42E-06	4.30E-03	859.7
16 13 57	4829	7.97	22.07	243.5	1.40	46.3	3.99E-06	3.36E-03	858.5
16 14 29	4810	8.17	22.22	243.4	1.37	46.1	3.63E-06	2.18E-03	859.1
16 15 1	4842	8.14	22.16	243.2	1.39	47.4	3.54E-06	2.16E-03	858.1
16 15 33	4858	8.01	22.27	243.1	1.36	48.1	3.97E-06	1.72E-03	857.5
16 16 5	4829	8.20	22.35	243.3	1.39	50.0	3.64E-06	2.30E-03	858.5

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 16 37	4836	8.23	22.50	243.2	1.39	50.3	3.90E-06	2.01E-03	858.2
16 17 9	4832	8.25	22.56	243.3	1.42	51.2	1.16E-05	9.07E-03	858.4
16 17 40	4830	8.37	22.57	242.8	1.31	47.8	3.77E-06	2.66E-03	858.4
16 18 12	4750	6.34	13.40	218.8	-4.23	42.8	2.45E 00	2.19E-01	861.1
16 18 44	4728	5.61	7.06	206.5	-6.96	39.9	3.23E 00	1.95E 00	861.8
16 19 16	4860	7.71	20.94	243.3	1.36	46.2	5.71E-02	8.71E-01	857.5
16 19 48	4875	8.19	22.29	243.2	1.47	47.0	3.52E-06	1.76E-02	857.0
16 20 20	4336	6.92	22.42	251.4	1.90	46.8	4.94E-06	5.07E-03	874.8
16 20 52	3686	5.05	22.63	261.1	2.30	40.7	1.06E-05	6.70E-03	896.6
16 21 24	3082	2.96	22.86	273.4	5.25	68.7	2.85E-04	1.84E-02	917.3
16 21 56	2319	4.09	23.16	295.8	6.52	152.2	8.93E-04	3.23E-02	944.0
16 22 28	1475	6.58	23.60	300.5	6.36	212.7	5.73E-04	6.81E-03	974.2
16 23 0	763	8.47	23.77	303.9	6.03	273.8	1.21E-03	2.26E-02	1000.3
16 23 32	460	9.07	23.62	306.7	6.11	314.4	8.82E-04	3.72E-02	1011.6
16 24 4	171	9.92	23.52	310.0	6.39	346.1	2.92E-03	1.13E-01	1022.4
16 24 36	21	10.61	23.71	311.7	6.61	366.2	3.71E-02	6.77E-01	1028.1
16 25 8	11	10.83	23.93	314.0	7.14	344.6	6.29E-02	1.07E 00	1028.5
16 25 40	9	11.30	23.89	313.7	7.19	366.2	5.68E-02	9.80E-01	1028.6
16 26 12	9	11.19	23.87	316.2	7.71	359.3	7.24E-02	1.08E 00	1028.6
16 26 44	19	11.03	23.65	311.6	6.69	356.1	3.48E-02	8.53E-01	1028.2
16 27 16	24	11.04	23.59	313.9	7.20	376.4	2.85E-02	7.60E-01	1028.0
16 27 48	15	10.89	23.73	313.8	7.12	347.1	2.34E-02	6.93E-01	1028.3
16 28 20	17	11.03	23.81	312.4	6.86	351.6	2.59E-02	6.94E-01	1028.3
16 28 52	33	10.87	23.88	315.4	7.51	347.0	2.31E-02	6.56E-01	1027.7
16 29 24	40	11.03	23.88	312.5	6.94	366.2	1.45E-02	5.23E-01	1027.4
16 29 56	34	11.04	23.95	314.4	7.34	358.0	2.84E-02	6.56E-01	1027.6
16 30 28	34	10.99	23.84	313.9	7.21	351.4	2.46E-02	6.12E-01	1027.6
16 31 0	46	10.86	23.78	314.1	7.25	370.6	3.92E-02	1.93E-01	1027.2
16 31 32	231	10.24	23.69	313.1	7.27	351.6	3.14E-03	3.21E-02	1020.2
16 32 4	812	8.52	23.31	308.1	7.02	285.8	1.06E-03	5.60E-03	998.5
16 32 36	1187	7.38	23.10	308.8	7.69	265.8	1.03E-03	9.10E-04	984.7
16 33 8	1731	5.80	22.73	307.0	8.07	222.7	1.38E-03	1.46E-03	964.9
16 33 40	2181	4.52	22.54	301.6	7.54	198.7	3.77E-04	4.57E-04	948.8
16 34 12	2701	2.84	22.06	300.2	7.89	150.5	1.63E-03	3.14E-04	930.5
16 34 44	3186	1.77	21.80	293.1	7.15	114.5	4.43E-04	1.19E-03	913.7
16 35 16	3616	3.92	21.93	268.9	3.54	46.0	2.37E-04	6.89E-03	899.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 35 48	4067	5.54	21.41	263.1	3.55	42.1	3.47E-05	1.34E-03	883.7
16 36 20	4540	6.81	21.10	254.6	2.95	37.4	6.32E-06	8.03E-04	868.0
16 36 52	4918	8.45	21.91	248.1	2.62	32.7	5.40E-06	5.80E-04	855.6
16 37 24	4907	8.48	22.03	247.8	2.56	30.9	4.56E-06	8.03E-04	856.0
16 37 56	4900	8.27	19.94	246.6	2.25	30.2	1.82E-05	8.57E-04	856.2
16 38 28	4924	9.18	20.55	244.2	1.96	29.0	9.80E-06	1.49E-03	855.4
16 39 0	4950	8.43	20.26	245.8	2.20	34.0	6.16E-06	5.61E-04	854.5
16 39 32	4747	7.95	20.87	246.7	1.90	34.8	3.59E-05	1.06E-03	861.2
16 40 4	4248	6.64	19.26	251.5	1.70	32.8	7.95E-06	8.89E-04	877.7
16 40 36	3823	4.60	16.06	237.7	-2.37	32.1	2.86E-01	7.04E-01	891.9
16 41 8	3860	5.31	16.15	260.4	2.54	43.6	1.25E-05	6.78E-02	890.7
16 41 40	3838	5.06	20.12	260.3	2.43	36.9	1.10E-05	1.87E-03	891.4
16 42 12	3899	5.37	20.74	261.1	2.78	36.6	1.46E-05	1.31E-03	889.4
16 42 44	3843	5.66	20.79	258.4	2.16	41.3	3.40E-06	6.06E-04	891.3
16 43 16	3857	5.44	19.12	258.2	2.10	53.6	2.50E-05	9.97E-04	890.8
16 43 48	3691	4.65	21.33	263.4	2.69	33.5	6.09E-04	9.28E-03	896.4
16 44 20	3410	2.40	22.33	280.9	5.26	57.0	5.37E-04	8.93E-03	906.0
16 44 52	3282	2.01	22.42	289.0	6.56	104.2	4.49E-04	3.34E-03	910.4
16 45 24	3301	1.76	22.43	285.5	5.83	73.3	3.37E-04	5.29E-03	909.7
16 47 0	3005	2.37	22.55	293.9	7.07	110.3	1.55E-03	2.15E-03	920.4
16 47 32	2916	2.62	22.71	296.8	7.55	99.0	1.67E-03	1.57E-03	923.5
16 48 4	2934	2.36	22.72	296.3	7.41	84.9	9.42E-04	1.03E-03	922.8
16 48 36	2880	2.45	22.74	294.7	7.00	110.2	1.03E-03	1.31E-03	924.7
16 49 8	2906	2.17	22.69	295.1	7.08	104.1	1.50E-03	1.22E-03	923.8
16 49 40	2566	3.31	22.74	298.0	7.25	130.5	7.72E-04	8.07E-04	935.7
16 50 12	2035	5.11	23.24	300.2	7.07	182.3	1.42E-03	1.60E-03	954.5
16 50 44	1920	5.30	23.11	299.3	6.70	211.2	1.20E-03	9.84E-04	958.6
16 51 16	1965	5.15	23.03	301.3	7.17	179.4	1.60E-03	3.88E-03	957.0
16 51 48	1895	5.36	22.92	300.8	6.97	183.8	5.74E-04	3.88E-04	959.5
16 52 20	1909	5.18	22.79	301.0	7.00	198.3	1.42E-03	1.77E-03	959.0
16 52 52	1619	6.31	22.82	301.5	6.77	226.4	8.91E-04	1.52E-03	969.5
16 53 24	1446	6.96	22.98	303.2	6.94	249.2	1.22E-03	1.92E-03	975.7
16 53 56	1464	6.79	22.97	303.1	6.91	237.9	1.35E-03	1.84E-03	975.1
16 54 28	1452	6.70	22.82	302.8	6.79	240.5	8.40E-04	1.18E-03	975.5
16 55 0	1371	7.03	22.82	304.5	7.06	245.0	1.01E-03	1.58E-03	978.5

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 55 32	842	8.72	23.25	307.8	7.06	282.8	1.01E-03	2.08E-03	997.8
16 56 4	211	10.97	23.46	311.2	6.98	330.9	8.32E-03	3.63E-02	1021.4
16 56 36	22	11.75	23.46	313.0	7.15	337.8	3.32E-02	1.72E-01	1028.6
16 57 8	15	11.50	23.31	315.3	7.58	341.8	4.89E-02	2.48E-01	1028.8
16 57 40	12	11.56	22.99	313.0	7.10	339.2	3.50E-02	4.44E-01	1028.9
16 58 12	9	11.91	23.21	317.9	8.23	346.9	5.18E-02	3.09E-01	1029.0
16 58 44	14	11.44	23.10	314.8	7.46	345.3	3.84E-02	2.59E-01	1028.9
16 59 16	13	11.37	23.07	318.0	8.12	351.3	4.16E-02	2.52E-01	1028.9
16 59 48	18	11.35	22.97	316.3	7.76	337.7	2.85E-02	2.28E-01	1028.7
17 0 20	25	10.98	22.95	315.0	7.39	341.4	2.54E-02	1.74E-01	1028.5
17 0 52	21	11.16	23.11	316.4	7.74	341.9	2.14E-02	2.02E-01	1028.6
17 1 24	23	11.36	23.22	315.8	7.68	355.7	2.27E-02	1.97E-01	1028.5
17 1 56	32	11.11	23.23	316.1	7.69	336.4	1.17E-02	1.09E-01	1028.2
17 2 28	44	11.04	23.13	315.1	7.47	289.2	5.35E-03	4.96E-02	1027.7
17 3 0	43	11.22	23.03	316.3	7.78	329.2	1.07E-02	8.36E-02	1027.8
17 3 32	43	10.96	23.01	314.3	7.28	347.0	7.66E-03	6.50E-02	1027.8
17 4 4	49	10.93	22.83	313.8	7.18	352.8	8.58E-03	6.69E-02	1027.6
17 4 36	63	10.80	22.68	315.3	7.50	337.6	5.22E-03	6.31E-02	1027.0
17 5 8	68	10.86	22.77	316.7	7.83	363.4	4.52E-03	3.88E-02	1026.8
17 5 39	65	11.18	22.64	314.0	7.32	355.5	6.09E-03	5.37E-02	1026.9
17 6 11	67	10.99	22.74	315.7	7.65	356.9	7.59E-03	4.71E-02	1026.9
17 6 43	85	10.78	22.71	316.1	7.71	348.5	5.86E-03	4.76E-02	1026.2
17 7 15	108	10.65	22.51	315.4	7.59	338.0	5.22E-03	3.39E-02	1025.3
17 7 47	96	10.95	22.53	315.8	7.73	347.5	5.11E-03	4.02E-02	1025.7
17 8 19	83	10.95	22.71	314.1	7.31	345.6	4.48E-03	3.91E-02	1026.2
17 8 51	154	10.56	22.46	312.8	7.10	338.9	4.25E-03	1.76E-02	1023.6
17 9 23	294	10.04	22.28	312.4	7.20	326.5	2.49E-03	1.39E-02	1018.3
17 9 55	288	9.89	22.32	314.4	7.57	312.2	1.33E-03	2.48E-03	1018.5
17 10 27	321	10.11	22.62	315.4	7.90	323.8	3.58E-03	1.46E-02	1017.3
17 10 59	301	10.15	22.68	313.0	7.36	323.2	1.89E-03	7.54E-03	1018.0
17 11 31	324	9.89	22.64	313.1	7.36	322.1	1.25E-03	6.90E-03	1017.1
17 12 3	461	9.38	22.39	313.1	7.54	319.2	1.17E-03	2.06E-03	1012.0
17 12 35	615	8.83	22.29	312.3	7.56	286.3	9.06E-04	2.74E-03	1006.3
17 13 7	582	8.98	22.36	312.4	7.54	303.8	1.39E-03	2.13E-03	1007.5
17 13 39	578	9.22	22.45	312.1	7.54	298.5	1.86E-03	2.77E-03	1007.7
17 14 11	635	9.07	22.35	311.2	7.42	298.2	3.21E-03	5.84E-03	1005.5

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 14 43	613	9.08	22.56	308.9	6.90	296.6	8.11E-04	2.65E-03	1006.4
17 15 15	908	8.20	22.37	309.9	7.51	263.8	2.15E-03	1.95E-02	995.4
17 15 47	984	7.80	22.28	308.5	7.27	267.8	1.14E-03	1.65E-02	992.6
17 16 19	924	7.98	22.33	310.5	7.62	273.6	2.07E-03	2.38E-03	994.8
17 16 51	1018	7.78	22.21	309.0	7.45	269.7	6.08E-02	2.33E-03	991.4
17 17 23	967	8.06	22.31	308.8	7.38	271.3	1.76E-03	1.69E-03	993.2
17 17 55	735	9.08	22.56	309.3	7.25	214.7	1.69E-03	6.44E-03	1001.8
17 18 27	269	10.69	22.88	311.3	7.07	310.8	3.19E-03	2.03E-02	1019.2
17 18 59	183	10.68	22.76	312.5	7.13	334.3	3.28E-03	1.56E-02	1022.5
17 19 31	192	10.66	22.77	312.1	7.07	322.9	2.64E-03	1.35E-02	1022.1
17 20 3	210	10.67	22.78	311.5	6.97	326.7	2.21E-03	1.37E-02	1021.4
17 20 35	172	10.84	22.90	310.6	6.73	320.2	3.24E-03	1.59E-02	1022.9
17 21 7	192	10.86	22.93	310.9	6.84	327.3	2.34E-03	1.09E-02	1022.1
17 21 39	195	10.97	23.03	310.2	6.73	332.0	1.83E-03	1.00E-02	1022.0
17 22 11	196	11.01	23.05	311.7	7.07	329.0	3.36E-03	1.66E-02	1022.0
17 22 43	211	11.01	23.05	310.7	6.69	330.8	2.14E-03	1.52E-02	1021.4
17 23 15	201	10.83	23.03	310.1	6.68	313.0	2.30E-03	7.62E-03	1021.8
17 23 47	220	11.13	23.08	309.8	6.75	312.1	4.42E-03	2.64E-02	1021.1
17 24 19	193	11.06	23.14	309.5	6.61	320.0	2.72E-03	1.34E-02	1022.1
17 24 51	204	10.80	22.90	310.6	6.81	312.9	2.50E-03	1.56E-02	1021.7
17 25 23	209	10.99	23.02	308.8	6.46	320.1	2.26E-03	1.47E-02	1021.5
17 25 55	202	10.98	23.08	310.6	6.83	319.6	1.96E-03	7.83E-03	1021.8
17 26 27	210	11.00	22.98	309.9	6.71	328.6	3.51E-03	1.80E-02	1021.4
17 26 59	216	10.87	22.97	310.0	6.72	332.7	2.81E-03	1.29E-02	1021.2
17 27 31	162	11.15	22.97	310.1	6.70	335.1	2.89E-03	1.62E-02	1023.3
17 28 3	184	10.89	22.97	310.2	6.69	319.5	2.02E-03	1.12E-02	1022.5
17 28 35	221	10.84	22.95	309.6	6.62	316.8	3.78E-03	2.06E-02	1021.0
17 29 7	169	10.90	23.00	310.5	6.72	321.2	2.43E-03	1.58E-02	1023.0
17 29 39	214	10.71	22.87	310.4	6.76	323.7	2.06E-03	1.30E-02	1021.3
17 30 11	209	10.94	22.84	309.2	6.55	316.3	2.38E-03	1.21E-02	1021.5
17 30 43	215	10.94	23.02	309.2	6.55	324.9	3.48E-03	1.60E-02	1021.3
17 31 15	138	11.12	23.02	310.2	6.76	325.1	3.70E-03	1.17E-02	1022.3
17 31 47	199	10.80	23.09	309.5	6.54	330.1	2.15E-03	1.07E-02	1021.9
17 32 19	240	10.69	23.03	308.0	6.28	321.0	2.44E-03	7.99E-03	1020.3
17 32 51	189	10.80	22.96	308.8	6.37	314.2	2.69E-03	1.75E-02	1022.2
17 33 23	225	10.59	22.89	307.6	6.14	322.7	2.53E-03	1.31E-02	1020.9
17 33 55	210	10.63	22.96	308.0	6.21	327.9	1.94E-03	7.60E-03	1021.5
17 34 27	209	10.53	23.04	307.4	6.05	323.8	2.63E-03	1.30E-02	1021.5



NOTE: Numbers give time in Central Standard Time

Figure B-9. Flight 9 Flight Track

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
09 58 13	4826	7.58	21.34	246.5	1.77	42.3	3.74E-06	3.35E-05	861.8
09 58 45	4845	7.65	21.44	245.9	1.69	25.1	4.02E-06	8.45E-05	861.1
09 59 17	4890	7.84	21.50	245.3	1.68	32.6	3.72E-06	9.12E-05	859.7
09 59 49	4598	7.87	21.58	248.4	1.79	43.5	1.59E-05	1.84E-04	869.3
10 0 21	4166	7.99	21.81	251.8	1.69	46.7	3.56E-06	1.05E-04	883.7
10 0 51	3551	8.24	21.88	257.6	1.75	43.2	3.49E-06	5.64E-04	904.5
10 1 23	3091	7.75	22.00	263.3	1.92	52.6	2.45E-06	1.97E-04	920.3
10 1 55	2847	7.07	21.73	266.7	2.01	44.8	2.45E-06	4.65E-04	928.8
10 2 27	2845	7.04	21.39	267.5	2.17	41.1	2.51E-06	1.06E-04	928.9
10 2 59	2876	6.84	21.04	267.1	2.09	428.2	3.23E-06	1.24E-04	927.8
10 3 28	2856	6.92	20.72	267.5	2.17	525.7	3.74E-06	1.41E-04	928.5
10 4 0	2824	7.09	20.08	268.1	2.25	557.9	4.09E-06	1.51E-04	929.6
10 4 32	2766	6.79	19.71	268.7	2.21	527.0	2.03E-06	1.17E-04	931.7
10 5 4	2827	6.56	19.75	268.5	2.23	510.6	2.45E-06	1.34E-04	929.5
10 5 36	2903	6.84	19.61	267.0	2.14	520.5	2.43E-06	1.79E-04	926.9
10 6 5	2927	7.30	19.73	265.7	2.01	563.4	2.33E-06	1.03E-04	926.1
10 6 37	2953	7.24	19.64	265.5	2.00	515.6	2.26E-06	2.98E-04	925.1
10 7 9	2948	7.25	19.39	265.5	2.00	253.9	1.87E-06	1.75E-04	925.3
10 7 41	2899	7.12	19.43	265.8	1.93	402.7	2.21E-06	8.82E-05	927.0
10 8 13	2935	7.30	19.61	265.1	1.89	457.8	2.05E-06	4.02E-05	925.8
10 8 44	2654	7.11	19.75	269.0	2.12	305.0	2.33E-06	4.07E-04	935.6
10 9 16	2116	5.18	20.17	283.2	3.54	587.1	1.45E-05	6.39E-04	954.7
10 9 48	1915	4.62	20.17	288.4	4.08	1042.6	3.32E-05	1.60E-03	961.9
10 10 20	1928	4.58	20.07	288.7	4.15	415.0	8.01E-05	2.65E-03	961.4
10 10 52	1890	4.52	20.07	290.2	4.39	101.1	1.72E-04	5.24E-03	962.8
10 11 24	2027	4.34	19.69	287.2	4.00	50.9	1.23E-05	6.33E-04	957.8
10 11 56	1940	4.26	19.53	289.1	4.19	21.9	2.69E-05	8.28E-04	960.9
10 12 28	1925	3.94	19.96	289.9	4.25	68.2	1.56E-04	2.26E-03	961.5
10 13 0	1918	4.32	19.83	290.9	4.54	109.0	1.65E-04	5.49E-03	961.8
10 13 32	1754	4.26	19.80	296.2	5.28	74.5	6.04E-04	5.39E-03	967.7
10 14 4	1912	4.12	19.80	289.6	4.20	69.8	9.86E-05	2.78E-03	962.0
10 14 36	1968	4.18	19.27	288.3	4.07	37.9	9.28E-05	2.04E-03	960.0
10 15 8	1923	4.23	19.68	288.8	4.09	52.7	1.63E-04	4.46E-03	961.6
10 15 40	1928	4.19	20.04	289.6	4.26	72.5	1.49E-04	2.99E-03	961.4
10 16 12	1929	4.72	20.05	288.1	4.07	66.6	1.46E-04	3.59E-03	961.4
10 16 44	1693	4.59	19.91	299.1	5.84	80.8	4.38E-04	3.53E-03	969.6

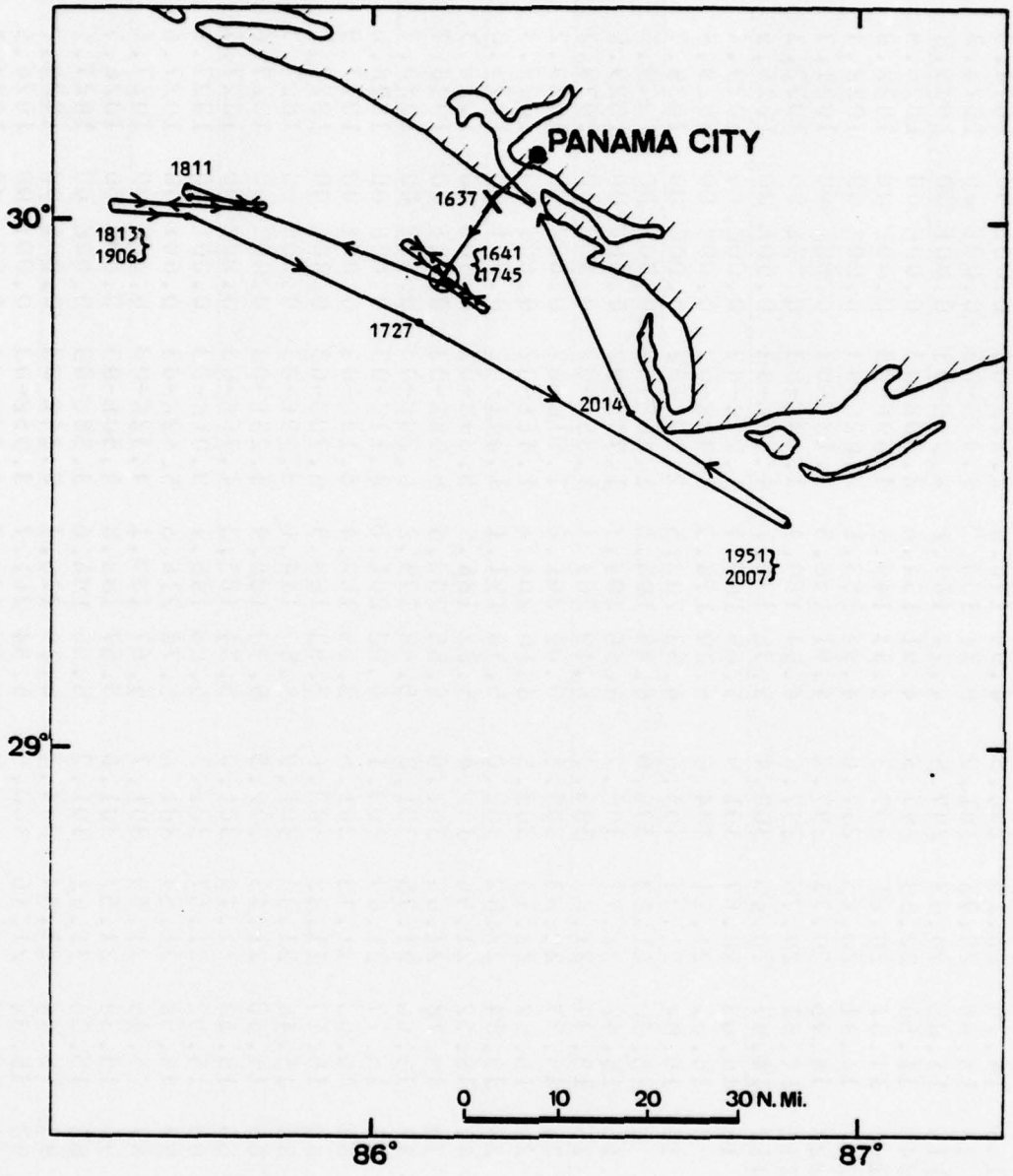
Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
10 17 16	1735	4.28	19.90	297.5	5.51	56.2	6.20E-04	4.45E-03	966.3
10 17 48	1834	3.77	20.09	295.0	5.07	66.2	5.53E-04	4.49E-03	964.8
10 18 20	1460	4.88	20.21	301.0	5.81	90.6	3.52E-04	3.66E-03	978.3
10 18 52	863	6.63	20.32	304.7	5.74	137.4	6.66E-04	4.73E-03	1000.3
10 19 25	267	8.30	20.30	307.5	5.44	192.2	1.26E-03	8.43E-03	1022.6
10 19 57	26	9.31	20.42	311.9	6.09	222.4	2.46E-02	5.97E-02	1031.7
10 20 29	18	9.04	20.26	310.5	5.71	224.5	2.17E-02	9.09E-02	1032.0
10 21 1	15	8.88	20.17	312.3	6.06	211.2	1.56E-02	6.74E-02	1032.1
10 21 33	14	8.88	20.09	313.4	6.29	209.2	2.90E-02	8.74E-02	1032.2
10 22 5	7	8.63	20.10	313.7	6.27	209.8	2.14E-02	8.68E-02	1032.4
10 22 37	8	8.80	20.04	313.7	6.31	209.9	1.81E-02	7.73E-02	1032.4
10 23 9	7	8.55	20.02	312.2	5.93	208.7	2.79E-02	7.51E-02	1032.4
10 23 41	25	8.84	19.55	315.7	6.80	202.5	8.19E-03	2.33E-02	1031.7
10 24 13	12	8.81	19.76	312.2	6.00	211.1	2.02E-02	1.05E-02	1032.2
10 24 45	19	8.73	19.81	313.9	6.37	222.6	1.22E-02	8.18E-03	1032.0
10 25 17	14	8.89	19.84	313.1	6.22	203.2	1.15E-02	9.08E-03	1032.2
10 25 49	14	9.23	19.64	314.1	6.52	231.6	1.67E-02	9.87E-03	1032.2
10 26 21	13	8.93	19.62	312.7	6.15	207.0	1.33E-02	1.12E-02	1032.2
10 26 53	14	9.02	19.64	314.0	6.44	226.1	1.70E-02	1.09E-02	1032.2
10 27 25	26	8.69	19.50	312.4	6.04	195.5	8.36E-03	8.00E-03	1031.7
10 27 57	35	8.60	19.43	313.5	6.28	180.5	6.70E-03	4.92E-03	1031.4
10 28 29	24	8.75	19.48	313.3	6.25	177.1	4.85E-03	4.83E-03	1031.8
10 29 1	25	8.98	19.46	313.9	6.43	212.5	5.35E-03	4.50E-03	1031.7
10 29 33	29	8.97	19.16	314.5	6.57	227.0	6.40E-03	4.21E-03	1031.6
10 30 5	23	9.01	19.11	314.9	6.65	225.6	6.77E-03	5.18E-03	1031.8
10 30 37	26	8.87	19.00	314.5	6.54	218.0	4.02E-03	4.99E-03	1031.7
10 31 9	49	8.61	19.02	311.9	5.98	207.9	2.27E-03	2.12E-03	1030.8
10 31 41	45	8.50	19.00	313.2	6.21	211.8	2.92E-03	1.84E-03	1031.0
10 32 13	105	8.58	18.79	312.3	6.17	214.4	3.76E-03	2.73E-03	1028.7
10 32 45	133	8.63	18.49	311.2	6.01	213.6	2.69E-03	2.95E-03	1027.6
10 33 17	63	8.73	18.61	313.7	6.42	224.2	2.26E-03	2.31E-03	1030.3
10 33 49	52	8.57	18.78	313.0	6.20	217.0	3.88E-03	3.06E-03	1030.7
10 34 21	78	8.36	18.31	312.8	6.17	209.9	2.30E-03	2.02E-03	1029.7
10 34 53	94	8.45	18.31	312.2	6.09	203.9	2.88E-03	2.06E-03	1029.1
10 35 25	82	8.43	18.56	311.4	5.89	210.1	1.47E-03	1.31E-03	1029.6

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
10 35 57	73	8.58	18.79	310.5	5.72	210.9	3.08E-03	1.93E-03	1029.9
10 36 29	75	8.65	18.91	312.4	6.14	216.9	2.26E-03	1.36E-03	1029.8
10 37 1	74	8.77	18.37	312.2	6.13	220.0	2.39E-03	1.67E-03	1029.9
10 37 33	72	8.58	18.26	313.1	6.27	210.9	2.04E-03	1.83E-03	1030.0
10 38 5	166	8.50	18.40	313.2	6.48	209.2	2.37E-03	1.55E-03	1026.4
10 38 37	147	8.45	18.60	312.4	6.26	200.8	1.43E-03	7.14E-04	1027.1
10 39 9	158	8.53	18.58	313.3	6.49	199.7	2.19E-03	1.04E-03	1026.7
10 39 41	150	8.57	18.55	312.3	6.27	198.4	1.51E-03	7.23E-04	1027.0
10 40 13	210	8.38	18.55	312.8	6.46	197.8	1.19E-03	6.62E-04	1024.7
10 40 45	264	8.00	18.77	311.5	6.21	194.2	7.64E-04	2.04E-04	1022.7
10 41 17	291	7.98	18.84	311.9	6.35	187.8	1.28E-03	2.74E-04	1021.7
10 41 49	277	8.22	18.85	312.0	6.41	191.9	2.01E-03	8.17E-04	1022.2
10 42 21	289	8.03	18.79	311.0	6.16	186.3	1.09E-03	2.78E-04	1021.7
10 42 53	420	7.65	18.81	309.4	6.01	167.6	8.11E-04	8.41E-05	1016.8
10 43 25	463	7.42	18.61	308.4	5.85	169.9	4.81E-04	7.94E-05	1015.2
10 43 57	433	7.56	18.51	309.0	5.94	168.9	6.07E-04	1.47E-04	1016.3
10 44 29	463	7.43	18.44	308.6	5.88	169.4	6.59E-04	1.34E-04	1015.2
10 45 1	492	7.38	17.63	308.3	5.87	174.8	4.87E-04	4.62E-05	1014.1
10 45 33	685	6.76	17.25	307.7	6.00	162.7	7.50E-04	8.19E-05	1006.9
10 46 5	726	6.69	17.22	306.8	5.90	160.5	1.08E-03	1.11E-04	1005.4
10 46 37	722	6.63	17.30	306.1	5.72	157.5	6.05E-04	5.83E-05	1005.5
10 47 9	723	6.67	17.24	306.2	5.76	157.3	5.61E-04	6.03E-05	1005.5
10 47 41	819	6.31	17.35	306.4	5.91	156.1	9.62E-04	1.02E-04	1001.9
10 48 13	953	5.83	17.33	305.3	5.86	143.9	1.10E-03	4.85E-05	996.9
10 48 45	922	5.97	17.41	303.7	5.48	145.1	3.76E-04	2.40E-05	998.1
10 49 17	944	5.84	17.30	304.9	5.76	144.6	5.15E-04	5.40E-05	997.3
10 49 49	983	5.65	17.42	305.5	5.93	139.8	4.56E-04	3.36E-05	995.8
10 50 21	1055	5.59	17.75	304.6	5.86	135.9	5.00E-04	1.39E-03	993.2
10 50 53	1348	4.76	17.55	299.8	5.28	114.3	4.30E-04	2.00E-03	982.4
10 51 25	1445	4.41	17.50	302.3	6.03	113.5	3.89E-04	1.11E-03	978.9
10 51 57	1468	4.43	17.45	301.6	5.83	112.7	6.36E-04	1.18E-03	978.0
10 52 29	1461	4.63	17.31	303.1	6.17	116.4	4.31E-04	8.81E-04	978.3
10 53 1	1462	5.13	17.53	300.6	5.78	118.9	3.76E-04	9.60E-04	978.3
10 53 33	1754	4.06	18.36	299.0	5.81	101.0	4.47E-04	1.30E-03	967.7
10 54 5	2135	3.86	19.30	286.7	4.02	64.9	2.96E-04	4.30E-03	954.0

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
10 54 37	2377	5.23	19.12	276.0	2.60	36.3	7.12E-05	4.16E-03	945.4
10 55 9	2697	6.28	19.23	269.2	2.66	28.0	1.34E-04	2.82E-03	934.1
10 55 41	2974	6.93	18.89	264.5	1.77	27.7	6.04E-05	2.25E-03	924.4
10 56 13	3254	7.46	18.80	260.1	1.51	21.5	4.78E-06	2.28E-04	914.7
10 56 45	3567	7.89	18.71	256.1	1.38	18.2	6.12E-06	1.29E-04	904.0
10 57 17	3850	8.32	18.86	252.9	1.36	19.3	9.00E-05	2.34E-04	894.3
10 57 49	4140	8.58	18.84	249.7	1.29	25.9	3.16E-04	8.91E-04	884.5
10 58 21	4452	8.63	18.86	246.5	1.24	23.2	4.78E-04	1.56E-03	874.1
10 58 53	4770	9.26	18.95	243.5	1.34	26.3	2.82E-03	2.88E-02	863.6
10 59 25	4926	9.57	18.81	241.5	1.27	22.1	4.17E-03	9.29E-03	858.5
10 59 57	4912	9.46	18.53	241.5	1.23	27.2	2.29E-03	4.29E-03	858.9
11 0 29	5097	8.48	18.63	240.9	1.27	24.3	3.83E-03	3.82E-03	852.9
11 1 1	5409	7.74	18.41	239.3	1.38	22.9	1.53E-03	4.28E-03	842.8
11 1 33	5741	8.85	18.23	234.8	1.24	11.4	7.01E-04	7.28E-03	832.1
11 2 5	6117	8.73	18.18	233.7	1.69	8.2	2.63E-04	7.21E-04	820.1
11 2 37	6431	8.55	18.16	232.1	1.90	7.2	3.96E-04	1.01E-03	810.3
11 3 9	6732	8.59	18.07	229.5	1.90	8.3	2.91E-04	4.89E-03	800.9
11 3 41	6936	9.41	18.23	225.7	1.62	8.6	1.91E-04	2.61E-03	794.6
11 4 13	7120	9.81	18.24	222.8	1.39	8.0	2.15E-04	1.26E-03	789.0
11 4 45	7408	10.00	18.15	219.9	1.31	7.3	2.64E-04	1.49E-03	780.2
11 5 17	7683	9.99	18.15	217.5	1.29	6.3	2.11E-04	2.03E-03	771.9
11 5 49	7908	9.90	17.96	215.4	1.23	6.3	2.46E-04	9.13E-04	765.1
11 6 21	8152	9.70	18.05	213.7	1.25	5.4	3.51E-04	1.41E-03	757.9
11 6 53	8478	9.69	18.14	211.8	1.40	4.4	1.99E-04	7.62E-04	748.3
11 7 25	8800	9.29	18.13	209.3	1.36	3.8	2.69E-04	7.15E-04	738.9
11 7 57	9099	8.81	18.08	208.3	1.56	3.0	4.64E-04	1.02E-03	730.3
11 8 29	9380	8.38	18.17	207.0	1.70	2.8	5.96E-04	5.95E-04	722.2
11 9 1	9665	7.93	18.20	205.6	1.79	2.8	2.68E-04	3.02E-03	714.1
11 9 33	9963	7.41	18.05	204.1	1.88	2.1	3.13E-04	5.31E-03	705.8
11 10 5	10185	6.61	14.36	181.9	-2.54	0.4	6.04E 00	2.27E-02	699.6
11 10 37	10383	5.15	8.75	194.4	0.18	-2.5	4.68E 01	8.68E-02	694.1
11 11 9	10661	6.13	18.77	200.7	2.10	3.1	2.78E-04	3.40E-02	686.4
11 11 41	10871	5.73	18.96	200.1	2.24	3.1	3.15E-04	3.63E-03	680.7
11 12 13	11067	5.53	19.05	198.7	2.23	2.7	4.57E-04	8.51E-04	675.4
11 12 45	11377	4.85	19.08	197.3	2.31	1.7	4.69E-04	5.44E-03	667.1
11 13 17	11655	4.17	19.16	196.2	2.40	0.7	5.57E-04	2.44E-03	659.7

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
11 13 49	11897	3.61	19.24	195.0	2.43	0.4	1.04E-03	9.27E-04	653.3
11 14 21	12146	3.16	19.11	194.6	2.66	0.2	7.84E-03	2.01E-03	646.8
11 14 53	12358	2.75	19.04	192.4	2.47	0.5	1.48E-03	2.28E-03	641.3
11 15 25	12617	2.09	18.89	191.4	2.55	0.8	3.66E-03	2.73E-03	634.6
11 15 57	12814	1.74	18.87	190.5	2.60	0.9	4.69E-04	9.84E-04	629.6
11 16 29	13083	1.19	18.78	189.0	2.59	0.6	3.89E-04	6.32E-04	622.8
11 17 1	13331	0.55	18.80	188.4	2.75	0.1	5.33E-04	5.25E-04	616.5
11 17 33	13565	0.06	18.97	187.1	2.74	-0.2	3.76E-04	2.20E-03	610.6
11 18 5	13866	-0.64	19.26	185.7	2.77	-0.3	2.84E-03	1.61E-03	603.2
11 18 37	14131	-1.20	19.37	184.3	2.78	0.2	2.95E-03	1.73E-03	596.7
11 19 9	14414	-1.76	19.31	182.6	2.75	0.5	4.19E-04	1.31E-03	589.8
11 19 41	14659	-2.37	19.14	181.3	2.74	-0.2	4.91E-04	1.15E-03	583.9
11 20 13	14870	-2.63	19.09	181.1	2.95	0.1	4.50E-04	1.54E-03	578.9
11 20 44	15117	-2.95	18.91	181.2	3.26	0.3	3.47E-04	1.83E-03	573.0
11 21 16	15331	-3.24	18.84	179.7	3.22	-0.9	6.61E-04	1.65E-03	568.0
11 21 48	15543	-3.74	18.77	177.6	3.01	-0.9	5.05E-04	1.54E-03	563.0
11 22 20	15797	-4.05	18.67	174.8	2.75	-1.2	7.42E-04	2.26E-03	557.1
11 22 52	16068	-4.35	18.64	173.0	2.71	-2.4	6.62E-04	1.96E-03	550.9
11 23 24	16379	-4.84	18.79	171.3	2.70	-3.0	2.84E-04	1.63E-03	543.8
11 23 56	16633	-5.01	19.04	170.0	2.77	-3.4	4.43E-04	1.79E-03	538.1
11 24 28	16982	-5.28	19.65	169.0	2.96	-4.2	1.68E-03	4.28E-03	530.3
11 25 0	17182	-5.82	19.92	168.2	2.98	-3.3	1.28E-03	1.19E-02	525.9
11 25 32	17414	-5.99	20.18	167.7	3.16	-3.5	2.81E-03	9.68E-03	520.8
11 26 4	17468	-6.94	19.88	167.6	3.07	-2.6	5.34E-04	2.06E-03	519.6
11 26 36	17638	-7.65	19.37	168.7	3.39	-3.0	4.63E-04	2.30E-03	515.9
11 27 8	17882	-8.02	19.06	166.3	3.19	-3.5	4.21E-04	2.21E-03	510.6
11 27 40	18107	-8.57	18.94	167.2	3.55	-4.8	4.37E-04	1.94E-03	505.8
11 28 12	18312	-9.01	18.86	166.6	3.62	-5.7	7.54E-04	2.01E-03	501.5
11 28 44	18536	-9.49	18.78	166.2	3.73	-6.0	1.13E-03	2.00E-03	496.7
11 29 16	18770	-10.08	18.65	166.0	3.89	-6.0	8.90E-04	2.26E-03	491.8
11 29 48	19026	-10.89	18.57	165.7	4.02	-6.5	1.82E-03	2.81E-03	486.5
11 30 20	19249	-11.43	18.50	166.1	4.27	-5.8	8.06E-04	3.89E-03	481.9
11 30 52	19449	-11.56	18.62	165.7	4.40	-5.8	6.67E-04	3.73E-03	477.8
11 31 24	19651	-12.14	18.68	164.3	4.29	-11.3	0.00E 00	5.16E-03	473.7
11 31 56	19718	-12.53	18.71	164.0	4.26	-3.9	0.00E 00	3.40E-03	472.3
11 32 28	19722	-12.33	18.77	162.9	4.10	-7.8	0.00E 00	4.73E-03	472.3

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
11 33 0	19703	-12.13	19.12	162.1	3.95	-8.9	0.00E 00	2.13E-02	472.7
11 33 32	19726	-12.02	19.27	161.3	3.84	-8.5	0.00E 00	8.32E-03	472.2
11 34 4	19701	-11.79	19.32	160.7	3.73	-8.2	0.00E 00	4.06E-03	472.7
11 34 36	19656	-11.57	19.34	160.3	3.65	-8.9	0.00E 00	3.43E-03	473.6
11 35 8	19615	-11.47	19.64	160.3	3.61	-9.4	0.00E 00	3.59E-03	474.4
11 35 40	19386	-10.78	19.76	160.7	3.50	-10.0	0.00E 00	3.06E-01	479.1
11 36 12	18940	-9.62	20.05	161.4	3.29	-9.7	0.00E 00	4.47E-02	488.3
11 36 44	18589	-8.95	20.07	159.5	2.62	-9.0	0.00E 00	0.00E 00	495.6
11 37 16	18281	-8.15	18.23	158.5	2.16	-9.0	0.00E 00	0.00E 00	502.1
11 37 48	17823	-6.73	16.97	157.5	1.60	-9.0	0.00E 00	0.00E 00	511.9
11 38 20	17321	-5.58	16.65	156.3	0.91	-8.8	0.00E 00	0.00E 00	522.8
11 38 52	16824	-4.66	17.69	159.2	0.95	-8.2	0.00E 00	0.00E 00	533.3
11 39 23	16260	-3.72	17.04	160.1	0.52	-8.2	0.00E 00	0.00E 00	546.5
11 39 55	15572	-2.68	19.20	165.1	0.74	-7.6	0.00E 00	0.00E 00	562.4
11 40 27	14834	-2.00	19.81	167.0	0.21	-7.1	0.00E 00	0.00E 00	579.7
11 40 59	14228	-0.72	19.83	169.9	0.12	-7.0	0.00E 00	0.00E 00	594.3
11 41 31	13706	0.28	20.19	172.3	-0.00	-7.5	0.00E 00	0.00E 00	607.2
11 42 3	12876	2.63	20.26	175.2	-0.31	-8.2	0.00E 00	0.00E 00	628.0
11 42 35	12009	4.80	20.50	178.9	-0.54	-7.5	0.00E 00	0.00E 00	650.4
11 43 7	11137	6.51	20.61	183.5	-0.69	-6.2	0.00E 00	0.00E 00	673.5
11 43 39	10279	8.09	20.71	188.1	-0.89	-5.2	0.00E 00	0.00E 00	696.9
11 44 11	9401	9.48	20.60	193.4	-1.01	-3.2	0.00E 00	0.00E 00	721.6
11 44 43	8379	10.56	20.40	201.1	-0.94	-1.9	0.00E 00	0.00E 00	751.2
11 45 15	7532	10.76	20.33	208.8	-0.72	-0.3	0.00E 00	0.00E 00	776.4



NOTE: Numbers give time in Central Standard Time

Figure B-11. Flight 11 Flight Track

	Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
6	16 36 57	147	14.71	20.10	298.8	5.04	166.1	2.06E-03	0.00E 00	1024.6
7	16 37 29	156	14.76	20.15	298.5	4.99	170.8	2.57E-03	0.00E 00	1024.3
8	16 38 1	35	15.60	20.76	301.2	5.54	183.2	8.47E-03	0.00E 00	1028.8
9	16 38 33	115	15.05	20.63	297.5	4.74	169.2	4.99E-03	0.00E 00	1025.8
10	16 39 5	248	14.50	20.63	297.5	4.91	154.6	2.40E-03	0.00E 00	1020.9
11	16 39 37	198	14.87	20.81	297.3	4.84	149.9	1.69E-03	0.00E 00	1022.8
12	16 40 9	207	14.91	20.85	297.6	4.94	153.1	2.02E-03	0.00E 00	1022.4
13	16 40 41	227	14.95	20.77	297.2	4.91	158.5	3.18E-03	0.00E 00	1021.7
14	16 41 13	211	14.81	20.76	297.6	4.94	150.4	1.59E-03	0.00E 00	1022.3
15	16 41 45	112	14.97	20.40	300.4	5.38	171.7	4.58E-03	0.00E 00	1025.9
16	16 42 17	18	15.63	20.87	301.9	5.65	162.4	1.21E-02	0.00E 00	1029.4
17	16 42 49	8	15.82	21.21	304.6	6.29	178.2	1.92E-02	0.00E 00	1029.8
18	16 43 21	10	15.84	21.34	305.6	6.53	202.5	2.17E-02	0.00E 00	1029.7
19	16 43 53	8	15.70	21.53	305.6	6.49	198.6	1.48E-02	0.00E 00	1029.8
20	16 44 25	15	15.42	21.77	306.2	6.56	207.3	1.79E-02	0.00E 00	1029.5
21	16 44 56	25	15.79	21.89	305.3	6.49	209.3	1.35E-02	0.00E 00	1029.2
22	16 45 28	24	15.77	22.03	303.3	6.02	201.0	1.51E-02	0.00E 00	1029.2
23	16 46 0	21	15.87	22.10	303.5	6.10	204.4	1.46E-02	0.00E 00	1029.3
24	16 46 32	28	15.34	22.02	302.0	5.76	191.1	1.41E-02	0.00E 00	1029.0
25	16 47 4	47	15.52	21.96	302.4	5.82	186.5	5.89E-03	0.00E 00	1028.3
26	16 47 36	39	15.78	21.66	301.0	5.55	203.8	8.98E-03	0.00E 00	1028.7
27	16 48 8	37	15.66	21.75	301.8	5.68	179.2	6.28E-03	0.00E 00	1028.7
28	16 48 40	41	15.77	21.67	303.1	6.02	201.0	8.11E-03	0.00E 00	1028.6
29	16 49 12	58	15.63	21.43	301.6	5.69	182.4	5.18E-03	0.00E 00	1027.9
30	16 49 44	80	15.57	21.32	302.6	5.93	169.5	6.70E-03	0.00E 00	1027.1
31	16 50 16	66	15.48	21.34	301.2	5.57	144.0	3.99E-03	0.00E 00	1027.7
32	16 50 48	66	15.60	21.43	302.5	5.90	185.9	5.28E-03	0.00E 00	1027.6
33	16 51 20	66	15.50	21.49	301.0	5.54	185.3	4.76E-03	0.00E 00	1027.7
34	16 51 52	60	15.62	21.57	302.5	5.89	186.4	9.01E-03	0.00E 00	1027.9
35	16 52 24	67	15.58	21.57	301.6	5.70	216.8	5.42E-03	0.00E 00	1027.6
36	16 52 56	67	15.45	21.59	301.7	5.67	189.1	4.32E-03	0.00E 00	1027.6
37	16 53 28	90	15.38	21.57	301.0	5.57	188.8	4.50E-03	0.00E 00	1026.7
38	16 54 0	82	15.26	21.62	301.2	5.56	196.6	3.58E-03	0.00E 00	1027.1
39	16 54 32	93	15.44	21.54	304.2	6.29	216.1	8.36E-03	0.00E 00	1026.7
40	16 55 4	93	15.34	21.46	300.9	5.54	201.7	3.95E-03	0.00E 00	1026.5
41	16 55 36	163	14.93	21.30	300.7	5.55	193.4	3.23E-03	0.00E 00	1024.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
16 56 8	207	15.07	21.16	300.6	5.66	191.1	4.35E-03	0.00E 00	1022.4
16 56 40	184	15.04	20.91	301.7	5.85	184.9	2.41E-03	0.00E 00	1023.3
16 57 12	201	15.13	20.68	300.9	5.71	203.6	3.58E-03	0.00E 00	1022.7
16 57 44	224	15.12	20.53	301.2	5.83	189.4	4.85E-03	0.00E 00	1021.8
16 58 16	287	14.56	20.35	298.3	5.19	171.6	1.38E-03	0.00E 00	1019.5
16 58 48	292	14.51	20.17	298.9	5.31	171.4	2.22E-03	0.00E 00	1019.3
16 59 20	323	14.43	20.09	299.7	5.55	170.9	2.41E-03	0.00E 00	1018.2
16 59 52	302	14.71	20.09	300.1	5.65	182.4	2.15E-03	0.00E 00	1018.9
17 0 24	334	14.52	19.95	300.8	5.83	200.2	3.11E-03	0.00E 00	1017.8
17 0 56	463	13.87	20.04	298.6	5.48	159.4	2.60E-03	0.00E 00	1013.0
17 1 28	501	13.80	19.98	299.1	5.65	173.5	2.51E-03	0.00E 00	1011.6
17 2 0	466	13.79	19.94	299.1	5.57	161.8	2.00E-03	0.00E 00	1012.9
17 2 32	494	13.76	19.96	297.7	5.32	156.2	1.59E-03	0.00E 00	1011.9
17 3 4	500	13.79	20.14	298.0	5.40	163.1	2.45E-03	0.00E 00	1011.6
17 3 36	527	13.78	20.33	298.3	5.50	160.6	3.82E-03	0.00E 00	1011.0
17 4 8	737	12.91	20.27	297.2	5.52	149.8	1.81E-03	0.00E 00	1003.0
17 4 40	758	13.11	20.37	298.4	5.87	150.5	2.25E-03	0.00E 00	1002.2
17 5 12	849	12.99	20.85	299.3	6.25	159.0	3.90E-03	0.00E 00	998.9
17 5 44	792	13.25	20.93	298.6	6.03	151.9	2.50E-03	0.00E 00	1001.0
17 6 16	803	13.04	21.22	297.8	5.82	159.8	1.73E-03	0.00E 00	1000.6
17 6 48	757	12.87	20.98	298.9	5.93	161.8	3.31E-03	0.00E 00	1002.3
17 7 20	929	12.29	20.97	297.8	5.91	155.7	3.67E-03	0.00E 00	996.1
17 7 52	960	12.10	20.84	297.5	5.87	150.0	2.05E-03	0.00E 00	994.9
17 8 24	1007	11.97	20.91	296.2	5.65	144.3	1.89E-03	0.00E 00	993.2
17 8 56	1004	11.98	20.97	295.8	5.57	148.0	1.29E-03	0.00E 00	993.4
17 9 28	1041	11.89	20.90	296.6	5.80	143.4	3.38E-03	0.00E 00	992.0
17 10 0	1211	11.58	20.71	296.1	5.97	122.4	2.19E-03	0.00E 00	985.9
17 10 32	1469	10.66	20.54	294.2	5.87	120.2	3.76E-03	0.00E 00	976.7
17 11 4	1489	10.63	20.61	293.3	5.73	125.1	1.48E-03	0.00E 00	976.0
17 11 36	1436	10.92	21.02	292.9	5.59	129.7	9.23E-04	0.00E 00	977.9
17 12 8	1478	10.66	20.98	294.3	5.92	126.0	1.96E-03	0.00E 00	976.4
17 12 40	1538	10.60	21.01	293.6	5.88	121.7	1.78E-03	0.00E 00	974.2
17 13 12	1895	9.67	20.78	292.4	6.13	97.5	2.61E-03	0.00E 00	961.6
17 13 44	1963	9.43	20.85	290.0	5.69	98.1	1.60E-03	0.00E 00	959.2
17 14 15	1958	9.44	20.96	290.0	5.69	100.6	1.08E-03	0.00E 00	959.4

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 14 47	1987	9.50	20.82	289.9	5.75	95.1	4.39E-03	0.00E 00	958.4
17 15 19	1963	9.59	20.80	290.0	5.75	94.9	2.45E-03	0.00E 00	959.2
17 15 51	1985	9.64	20.61	288.2	5.41	102.6	9.92E-04	0.00E 00	958.4
17 16 23	2350	8.63	20.26	285.9	5.43	68.9	3.32E-03	0.00E 00	945.7
17 16 55	2441	8.03	13.66	282.6	4.77	59.1	5.81E 01	0.00E 00	942.6
17 17 27	2442	8.78	20.05	281.9	4.81	66.4	1.55E-03	0.00E 00	942.6
17 17 59	2505	8.60	19.91	281.9	4.89	65.5	1.01E-03	0.00E 00	940.4
17 18 31	2470	8.63	19.84	284.2	5.31	63.2	3.74E-03	0.00E 00	941.6
17 19 3	2441	8.35	19.81	286.0	5.57	62.8	3.87E-03	0.00E 00	942.6
17 19 35	2682	9.06	19.66	276.3	4.16	43.8	5.46E-04	0.00E 00	934.3
17 20 7	2964	9.39	19.43	271.7	3.81	14.1	3.20E-05	0.00E 00	924.6
17 20 39	2958	9.52	19.60	271.2	3.73	12.2	2.79E-05	0.00E 00	924.8
17 21 11	2969	9.43	19.76	271.0	3.68	8.6	3.15E-05	0.00E 00	924.5
17 21 43	2993	9.69	19.81	269.8	3.52	16.4	2.62E-05	0.00E 00	923.7
17 22 15	3005	9.63	19.95	269.4	3.46	12.6	2.89E-05	0.00E 00	923.2
17 22 47	3325	9.71	19.68	263.9	2.93	8.5	2.43E-05	0.00E 00	912.4
17 23 19	3707	9.64	19.43	256.1	1.98	7.9	3.26E-05	0.00E 00	899.6
17 23 51	3917	9.65	19.30	253.7	1.89	7.9	2.06E-05	0.00E 00	892.6
17 24 23	3999	9.83	19.56	253.0	1.93	6.5	1.41E-05	0.00E 00	889.9
17 24 55	4056	10.03	19.72	251.5	1.77	8.0	2.60E-05	0.00E 00	888.1
17 25 27	4041	9.75	19.80	251.8	1.73	7.6	1.53E-05	0.00E 00	888.5
17 25 59	3982	9.81	19.85	251.3	1.63	8.0	1.60E-05	0.00E 00	890.5
17 26 31	4277	9.62	19.83	249.6	1.70	8.2	3.53E-05	0.00E 00	880.8
17 27 3	4714	10.66	19.70	242.8	1.28	4.9	6.77E-05	0.00E 00	866.6
17 27 35	5130	11.29	19.77	237.1	0.95	6.1	5.85E-05	0.00E 00	853.2
17 28 7	5415	11.03	13.41	234.2	0.81	4.8	4.36E 01	0.00E 00	844.2
17 28 39	5672	11.38	12.94	220.7	-1.59	2.4	3.67E 01	0.00E 00	836.1
17 29 11	5935	12.24	20.16	228.0	0.65	4.3	3.39E-05	0.00E 00	827.9
17 29 43	5931	12.23	20.49	227.4	0.49	2.9	2.53E-05	0.00E 00	828.0
17 30 15	5932	12.19	20.81	227.3	0.48	-0.8	1.46E-05	0.00E 00	828.0
17 30 47	5906	12.32	20.68	227.4	0.48	6.7	2.22E-05	0.00E 00	828.8
17 31 19	5914	12.51	20.72	227.3	0.49	6.7	2.89E-05	0.00E 00	828.5
17 31 51	5972	12.64	20.67	226.8	0.52	6.8	1.31E-05	0.00E 00	826.7
17 32 23	6035	12.79	20.60	226.4	0.58	6.5	1.35E-05	0.00E 00	824.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 32 55	6388	12.66	20.36	224.8	0.84	4.3	2.75E-05	0.00E 00	813.9
17 33 27	6744	12.16	20.26	223.1	1.04	3.5	1.70E-04	0.00E 00	803.0
17 33 59	7041	11.92	20.17	221.5	1.18	4.8	4.25E-04	0.00E 00	794.0
17 34 31	7295	11.90	20.16	219.5	1.20	3.3	1.19E-04	0.00E 00	786.4
17 35 3	7554	11.92	20.22	217.5	1.21	0.6	1.19E-04	0.00E 00	778.7
17 35 35	7817	11.70	20.15	215.4	1.19	0.2	5.45E-04	0.00E 00	770.9
17 36 7	7925	11.54	20.23	214.4	1.12	-0.3	1.15E-03	0.00E 00	767.8
17 36 39	7959	11.56	20.22	213.8	1.06	-0.5	2.51E-03	0.00E 00	766.8
17 37 11	7885	11.89	20.23	213.7	0.96	0.4	1.63E-04	0.00E 00	769.0
17 37 43	7893	11.81	19.95	213.6	0.94	1.5	2.79E-04	0.00E 00	768.7
17 38 14	7915	11.73	19.44	213.7	0.97	3.6	4.26E-04	0.00E 00	768.1
17 38 46	8060	11.51	17.77	213.2	1.09	1.2	2.46E 01	0.00E 00	763.8
17 39 18	8255	11.16	18.91	212.4	1.19	3.2	4.74E-02	0.00E 00	758.2
17 39 50	8451	11.29	18.96	210.7	1.19	4.7	6.50E-05	0.00E 00	752.5
17 40 22	8811	11.02	19.01	208.5	1.26	3.4	4.99E-05	0.00E 00	742.2
17 40 54	9162	10.15	18.83	207.8	1.57	4.5	5.31E-05	0.00E 00	732.2
17 41 26	9451	9.42	18.77	206.9	1.74	4.0	7.54E-05	0.00E 00	724.1
17 41 58	9736	8.78	18.70	205.9	1.87	3.8	6.32E-05	0.00E 00	716.2
17 42 30	9860	8.32	18.71	205.4	1.90	1.4	2.12E-04	0.00E 00	712.8
17 43 2	9930	8.04	19.00	205.0	1.87	2.6	1.27E-04	0.00E 00	710.9
17 43 34	10007	7.82	19.24	204.4	1.85	1.5	2.37E-04	0.00E 00	708.7
17 44 6	10006	8.02	19.41	204.0	1.78	1.0	8.51E-05	0.00E 00	708.8
17 44 38	9983	8.23	19.84	203.6	1.70	1.1	2.56E-04	0.00E 00	709.4
17 45 10	9912	8.53	20.03	203.3	1.56	0.8	1.05E-04	0.00E 00	711.4
17 45 42	9909	8.13	14.15	203.3	1.51	-3.0	6.88E 01	0.00E 00	711.4
17 46 14	9868	6.52	-4.57	199.3	0.35	-12.6	4.27E 02	0.00E 00	712.6
17 46 46	9938	7.48	10.21	202.7	1.33	-4.2	1.31E 02	0.00E 00	710.6
17 47 18	9938	8.12	20.43	203.3	1.55	0.2	7.23E-03	0.00E 00	710.6
17 47 50	9928	8.17	20.51	203.3	1.55	0.9	1.76E-03	0.00E 00	710.9
17 48 22	9935	8.16	20.27	203.2	1.53	-0.4	1.23E 01	0.00E 00	710.7
17 48 54	9915	7.47	12.75	203.0	1.34	-2.1	8.05E 01	0.00E 00	711.3
17 49 26	9917	8.21	20.30	203.3	1.52	1.5	1.80E-04	0.00E 00	711.2
17 49 58	9921	7.30	10.78	201.1	0.93	-1.3	9.05E 01	0.00E 00	711.1
17 50 30	9932	7.75	16.09	203.4	1.50	1.0	3.97E 01	0.00E 00	710.8
17 51 2	9935	8.01	19.95	203.5	1.56	3.8	4.39E-04	0.00E 00	710.7

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 51 33	9927	7.97	19.89	203.6	1.56	2.0	5.07E-05	0.00E 00	710.9
17 52 5	9929	7.93	19.91	203.6	1.57	2.1	4.39E-05	0.00E 00	710.9
17 52 37	9931	7.90	19.97	203.6	1.56	2.4	9.18E-05	0.00E 00	710.8
17 53 9	9943	7.85	19.91	203.6	1.57	2.2	5.31E-05	0.00E 00	710.5
17 53 41	9959	7.79	19.86	203.6	1.59	2.3	4.65E-05	0.00E 00	710.1
17 54 13	9965	7.82	19.89	203.6	1.59	2.1	6.63E-05	0.00E 00	709.9
17 54 45	9976	7.82	19.84	203.4	1.59	1.6	1.03E-04	0.00E 00	709.6
17 55 17	10004	7.73	19.76	203.3	1.59	1.4	1.12E-04	0.00E 00	708.8
17 55 49	10016	7.69	19.60	203.3	1.61	1.3	9.38E-05	0.00E 00	708.5
17 56 21	10028	7.67	19.45	203.2	1.60	1.0	1.55E-04	0.00E 00	708.2
17 56 53	10038	7.65	19.62	203.2	1.62	0.9	1.99E-04	0.00E 00	707.9
17 57 25	10037	7.63	20.27	203.1	1.59	0.8	1.32E-04	0.00E 00	707.9
17 57 57	10053	7.61	20.62	203.0	1.59	0.8	1.08E-04	0.00E 00	707.5
17 58 29	10029	7.71	20.79	203.2	1.60	0.9	7.02E-05	0.00E 00	708.1
17 59 1	9988	7.88	20.96	203.2	1.57	0.7	7.59E-05	0.00E 00	709.3
17 59 33	9687	8.74	20.99	204.3	1.45	-0.8	1.10E-04	0.00E 00	717.6
18 0 5	9223	10.03	21.06	205.1	1.07	-0.7	6.35E-05	0.00E 00	730.5
18 0 37	8733	11.43	21.17	205.9	0.65	-0.2	8.46E-05	0.00E 00	744.4
18 1 9	8156	12.99	21.17	207.1	0.17	1.5	4.94E-05	0.00E 00	761.1
18 1 41	7545	13.35	20.89	211.2	0.05	1.6	1.73E-05	0.00E 00	779.0
18 2 13	6956	12.55	20.62	217.7	0.34	1.2	2.03E-05	0.00E 00	796.1
18 2 45	6300	12.78	20.92	222.8	0.31	2.7	1.66E-05	0.00E 00	816.0
18 3 17	5682	12.58	21.12	228.1	0.30	4.9	1.71E-05	0.00E 00	835.2
18 3 49	5088	11.90	21.35	234.0	0.34	7.2	1.15E-05	0.00E 00	854.0
18 4 21	4728	10.83	21.21	240.6	0.89	8.2	2.89E-05	0.00E 00	865.6
18 4 53	4334	9.02	21.08	250.8	1.99	6.6	2.95E-05	0.00E 00	878.3
18 5 25	4026	8.77	21.11	254.1	2.05	7.5	1.16E-05	0.00E 00	888.4
18 5 57	3703	8.64	20.96	259.4	2.52	12.9	1.68E-05	0.00E 00	899.1
18 6 29	3359	8.59	20.82	267.4	3.54	9.1	1.68E-05	0.00E 00	910.7
18 7 1	3059	9.05	20.80	270.4	3.69	12.4	1.17E-05	0.00E 00	920.8
18 7 33	2746	7.99	20.93	280.7	5.02	42.2	3.53E-03	0.00E 00	931.4
18 8 5	2617	8.13	20.86	282.6	5.19	66.3	1.94E-03	0.00E 00	935.9
18 8 37	2390	8.36	20.87	288.5	6.04	75.3	4.19E-03	0.00E 00	943.7
18 9 9	2144	8.47	13.53	290.3	5.95	84.0	2.51E 01	0.00E 00	952.3

	Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
24	18 9 41	1938	9.50	20.82	290.7	5.86	100.6	1.72E 00	0.00E 00	959.5
25	18 10 12	1671	10.23	21.00	292.3	5.82	114.3	1.36E-03	0.00E 00	968.9
26	18 10 44	1381	11.14	21.04	293.9	5.79	123.9	2.60E-03	0.00E 00	979.1
27	18 11 16	1139	11.99	21.29	294.8	5.67	130.1	5.13E-03	0.00E 00	987.8
28	18 11 48	845	12.81	21.48	294.7	5.21	143.8	2.63E-03	0.00E 00	998.4
29	18 12 20	565	13.67	21.46	296.6	5.24	164.2	3.34E-03	0.00E 00	1008.6
30	18 12 52	207	14.82	21.43	300.8	5.68	189.3	4.21E-03	0.00E 00	1021.7
31	18 13 24	13	15.57	21.72	302.4	5.79	218.2	8.26E-03	0.00E 00	1028.9
32	18 13 56	8	15.73	21.73	303.2	6.00	214.8	1.00E-02	0.00E 00	1029.1
33	18 14 28	12	15.82	21.68	304.4	6.30	239.0	1.60E-02	0.00E 00	1029.0
34	18 15 0	8	15.81	21.63	301.6	5.66	226.5	1.33E-02	0.00E 00	1029.1
35	18 15 32	8	15.63	21.40	301.6	5.61	196.7	7.54E-03	0.00E 00	1029.1
36	18 16 4	23	15.60	20.98	302.3	5.79	222.6	5.45E-03	0.00E 00	1028.5
37	18 16 36	22	15.59	20.40	301.7	5.65	201.7	5.72E-03	0.00E 00	1028.6
38	18 17 8	14	15.55	20.31	301.9	5.68	191.2	4.83E-03	0.00E 00	1028.9
39	18 17 40	13	15.65	20.42	303.3	6.00	205.3	5.01E-03	0.00E 00	1028.9
40	18 18 12	26	15.79	20.43	304.0	6.24	221.3	1.02E-02	0.00E 00	1028.4
41	18 18 44	34	15.61	20.58	303.2	6.04	214.4	5.44E-03	0.00E 00	1028.1
42	18 19 16	30	15.48	20.78	303.5	6.05	212.6	4.45E-03	0.00E 00	1028.3
43	18 19 48	24	15.58	21.01	303.2	5.99	215.1	5.98E-03	0.00E 00	1028.5
44	18 20 20	22	15.51	21.11	303.2	5.97	201.0	8.58E-03	0.00E 00	1028.6
45	18 20 52	48	15.24	21.00	301.2	5.53	194.0	3.47E-03	0.00E 00	1027.6
46	18 21 24	50	15.31	21.07	301.3	5.57	204.3	4.01E-03	0.00E 00	1027.5
47	18 21 56	44	15.38	21.04	304.2	6.22	206.8	6.18E-03	0.00E 00	1027.8
48	18 22 28	44	15.24	21.11	300.4	5.33	203.5	4.32E-03	0.00E 00	1027.8
49	18 23 0	61	15.08	20.81	300.8	5.41	201.1	3.16E-03	0.00E 00	1027.1
50	18 23 31	82	15.01	20.73	301.6	5.62	205.9	4.19E-03	0.00E 00	1026.3
51	18 24 3	65	15.03	20.73	302.1	5.69	198.7	2.92E-03	0.00E 00	1027.0
52	18 24 35	92	15.03	20.70	302.3	5.81	212.6	5.81E-03	0.00E 00	1026.0
53	18 25 7	97	15.03	20.78	303.7	6.12	211.8	6.09E-03	0.00E 00	1025.8
54	18 25 39	259	14.37	20.74	301.7	5.87	178.4	5.43E-03	0.00E 00	1019.8
	18 26 11	297	14.40	20.80	300.7	5.75	187.6	4.36E-03	0.00E 00	1018.4
	18 26 43	194	14.94	21.00	300.8	5.67	207.0	3.95E-03	0.00E 00	1022.2
	18 27 15	153	14.85	21.03	300.5	5.50	196.7	2.24E-03	0.00E 00	1023.7
	18 27 47	175	14.75	21.15	300.1	5.43	188.7	3.59E-03	0.00E 00	1022.9
	18 28 19	168	14.94	21.03	301.0	5.67	211.1	5.41E-03	0.00E 00	1023.2

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
18 28 51	232	14.69	21.49	300.6	5.64	185.4	4.20E-03	0.00E 00	1020.8
18 29 23	291	14.40	21.12	300.0	5.58	175.1	2.15E-03	0.00E 00	1018.6
18 29 55	293	14.47	21.43	300.8	5.77	177.7	3.51E-03	0.00E 00	1018.6
18 30 27	290	14.65	21.52	299.8	5.60	177.9	3.76E-03	0.00E 00	1018.7
18 30 59	288	14.65	21.43	300.2	5.68	176.6	1.94E-03	0.00E 00	1018.7
18 31 31	456	14.17	21.28	300.2	5.92	171.3	2.25E-03	0.00E 00	1012.6
18 32 3	500	13.95	21.26	300.7	6.09	167.1	2.15E-03	0.00E 00	1011.0
18 32 35	466	14.13	21.30	301.4	6.20	171.7	1.83E-03	0.00E 00	1012.2
18 33 7	461	14.26	21.44	301.3	6.21	173.9	2.41E-03	0.00E 00	1012.4
18 33 39	481	14.10	21.41	300.6	6.06	165.2	1.45E-03	0.00E 00	1011.7
18 34 11	738	13.29	21.42	298.8	6.01	152.9	1.60E-03	0.00E 00	1002.3
18 34 43	708	13.46	21.34	299.2	6.07	157.8	1.21E-03	0.00E 00	1003.4
18 35 15	740	13.42	21.45	299.3	6.16	159.3	4.16E-03	0.00E 00	1002.3
18 35 47	730	13.59	21.52	298.9	6.08	151.9	2.28E-03	0.00E 00	1002.6
18 36 19	733	13.51	21.51	298.1	5.90	156.0	1.75E-03	0.00E 00	1002.5
18 36 51	723	13.57	21.58	299.7	6.25	157.1	2.21E-03	0.00E 00	1002.9
18 37 23	966	12.91	21.47	298.8	6.42	144.7	3.17E-03	0.00E 00	994.1
18 37 55	1081	12.58	21.37	296.8	6.14	135.7	3.75E-03	0.00E 00	989.9
18 38 27	943	12.86	21.64	297.6	6.09	146.1	8.35E-04	0.00E 00	994.9
18 38 59	980	12.63	21.52	297.9	6.17	144.7	2.47E-03	0.00E 00	993.6
18 39 31	977	12.77	21.50	296.9	5.98	146.5	1.30E-03	0.00E 00	993.7
18 40 3	950	12.88	21.55	297.4	6.05	148.0	1.94E-03	0.00E 00	994.6
18 40 35	959	12.69	21.56	297.5	6.06	144.7	1.30E-03	0.00E 00	994.3
18 41 7	1061	12.58	21.48	296.3	5.98	141.8	2.86E-03	0.00E 00	990.7
18 41 39	1385	11.43	21.25	294.8	6.06	126.4	2.02E-03	0.00E 00	979.1
18 42 10	1414	11.22	21.25	296.3	6.39	118.0	2.81E-03	0.00E 00	978.0
18 42 42	1469	11.10	21.35	295.8	6.36	119.3	2.50E-03	0.00E 00	976.1
18 43 14	1498	11.11	21.39	295.4	6.35	116.3	3.35E-03	0.00E 00	975.0
18 43 46	1521	11.16	21.54	295.1	6.33	113.7	3.86E-03	0.00E 00	974.2
18 44 18	1505	11.23	21.66	292.4	5.73	118.6	1.42E-03	0.00E 00	974.8
18 44 50	1762	10.28	21.47	293.2	6.21	88.8	3.63E-03	0.00E 00	965.7
18 45 22	2017	9.45	21.47	290.2	5.89	88.7	2.51E-03	0.00E 00	956.8
18 45 54	1994	9.70	21.66	291.2	6.12	92.1	1.72E-03	0.00E 00	957.6
18 46 26	1941	9.93	21.85	291.6	6.16	97.4	1.68E-03	0.00E 00	959.4
18 46 58	1944	9.91	21.81	292.4	6.33	93.3	2.06E-03	0.00E 00	959.3
18 47 31	1942	10.02	21.70	291.2	6.09	95.2	1.69E-03	0.00E 00	959.4

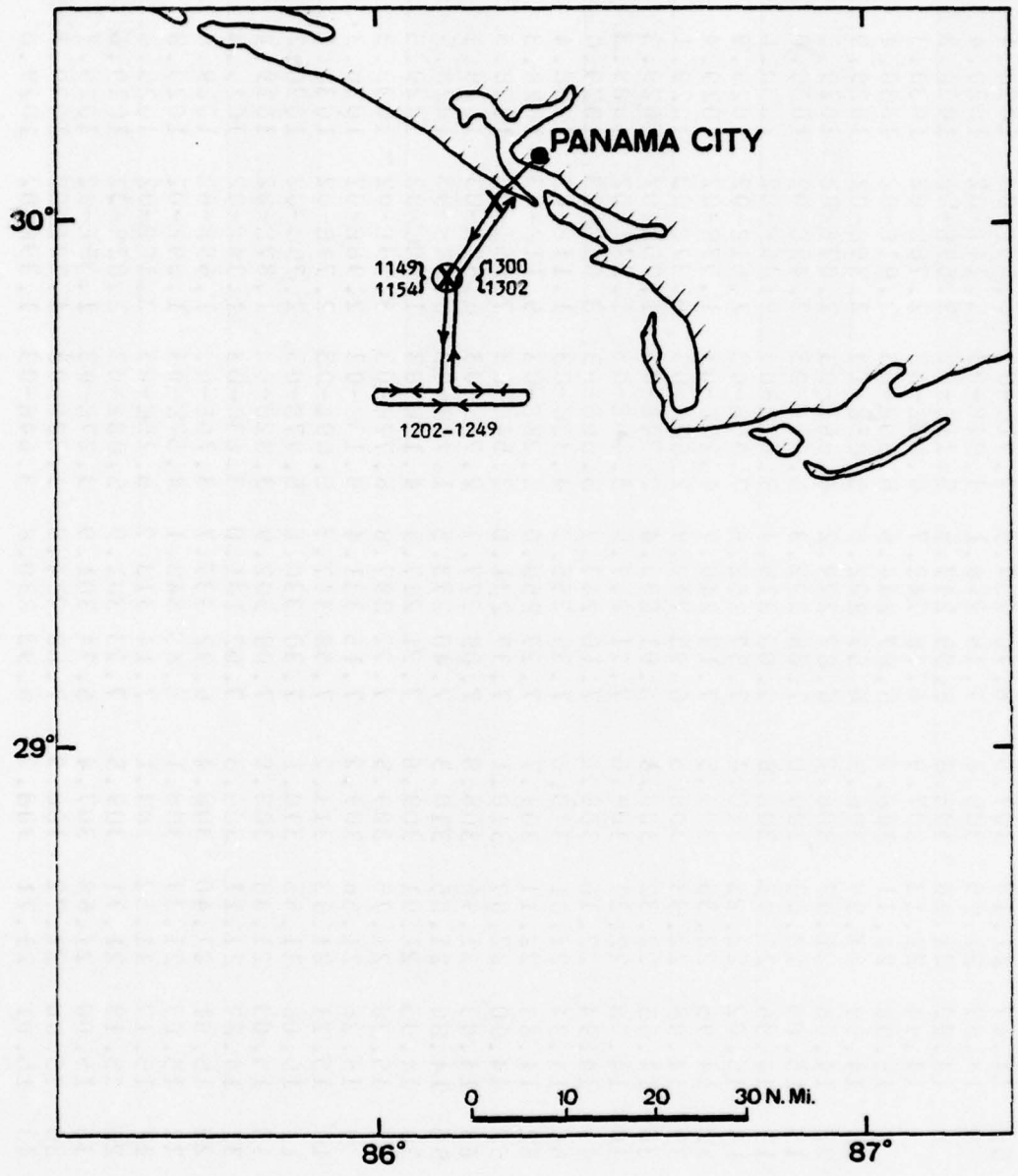
Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
18 48 3	2038	9.73	21.48	290.4	6.05	95.8	3.38E-03	0.00E 00	956.0
18 48 35	2276	9.18	21.06	287.6	5.81	82.3	2.31E-03	0.00E 00	947.7
18 49 7	2470	8.69	20.98	286.9	5.93	64.7	3.41E-03	0.00E 00	941.0
18 49 39	2500	8.65	21.19	286.4	5.87	58.3	2.70E-03	0.00E 00	940.0
18 50 12	2478	8.81	21.39	284.9	5.55	70.4	2.01E-03	0.00E 00	940.8
18 50 44	2479	8.89	21.43	286.5	5.90	68.8	2.33E-03	0.00E 00	940.7
18 51 16	2500	8.68	21.43	288.0	6.23	66.0	2.05E-03	0.00E 00	940.0
18 51 48	2806	8.23	21.10	280.2	5.09	43.4	5.05E-03	0.00E 00	929.5
18 52 20	2942	9.31	21.01	270.7	3.56	17.3	5.40E-05	0.00E 00	924.9
18 52 52	2937	8.77	21.10	273.7	4.07	14.4	1.23E-03	0.00E 00	925.0
18 53 24	2942	9.02	21.24	272.5	3.89	11.7	7.63E-04	0.00E 00	924.9
18 53 56	2958	9.22	21.30	270.0	3.42	15.2	7.34E-04	0.00E 00	924.3
18 54 28	2992	9.29	21.27	269.6	3.42	10.6	6.79E-05	0.00E 00	923.2
18 55 0	2983	9.61	21.31	268.0	3.14	8.6	3.19E-05	0.00E 00	923.5
18 55 32	3240	9.67	21.18	264.1	2.82	11.1	7.95E-05	0.00E 00	914.8
18 56 4	3619	9.07	21.04	258.3	2.21	8.2	4.53E-05	0.00E 00	902.1
18 56 36	4019	9.39	20.98	252.3	1.76	5.6	2.40E-04	0.00E 00	888.8
18 57 8	4451	10.91	20.85	244.1	1.12	7.1	1.93E-04	0.00E 00	874.7
18 57 40	4815	12.20	20.80	237.4	0.61	8.5	2.91E-05	0.00E 00	862.9
18 58 12	4898	12.45	21.13	235.0	0.29	8.9	1.94E-05	0.00E 00	860.3
18 58 44	4934	12.49	21.18	234.2	0.19	8.8	1.49E-05	0.00E 00	859.1
18 59 16	4926	12.48	21.25	234.2	0.17	9.7	1.34E-05	0.00E 00	859.3
18 59 48	4915	12.42	21.35	234.4	0.19	10.6	1.37E-05	0.00E 00	859.7
19 0 20	4827	11.85	9.57	235.3	0.10	3.5	1.61E 02	0.00E 00	862.5
19 0 52	4773	11.66	14.08	236.2	0.15	6.8	1.22E 02	0.00E 00	864.3
19 1 24	4683	11.77	21.30	238.0	0.41	9.4	1.85E-02	0.00E 00	867.2
19 1 56	4248	10.21	21.03	247.9	1.43	8.2	5.25E-05	0.00E 00	881.3
19 2 28	3955	9.33	21.04	253.1	1.80	9.4	1.70E-05	0.00E 00	890.9
19 3 0	3481	9.18	21.15	263.0	2.95	11.0	2.78E-05	0.00E 00	906.7
19 3 31	2964	8.77	21.38	275.0	4.41	14.1	8.57E-04	0.00E 00	924.1
19 4 3	2493	8.89	21.62	284.9	5.60	51.1	2.53E-03	0.00E 00	940.2
19 4 35	1942	10.25	21.71	290.2	5.95	76.9	1.76E-03	0.00E 00	959.4
19 5 7	1323	12.10	22.03	292.4	5.56	101.0	1.51E-03	0.00E 00	981.3
19 5 39	803	13.56	22.06	295.3	5.44	121.2	2.35E-03	0.00E 00	1000.0
19 6 11	296	15.17	21.92	298.1	5.35	160.3	2.79E-03	0.00E 00	1018.5

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
19 6 43	183	15.62	21.96	298.2	5.25	186.5	2.24E-03	0.00E 00	1022.6
19 7 15	241	15.37	21.95	298.1	5.28	186.3	2.36E-03	0.00E 00	1020.5
19 7 47	176	15.73	21.93	299.8	5.62	186.3	3.66E-03	0.00E 00	1022.9
19 8 19	233	15.47	21.89	298.5	5.38	196.3	2.43E-03	0.00E 00	1020.8
19 8 51	220	15.56	21.96	300.0	5.71	198.4	2.72E-03	0.00E 00	1021.3
19 9 23	206	15.60	21.96	299.3	5.54	195.0	2.52E-03	0.00E 00	1021.8
19 9 55	186	15.59	21.88	299.8	5.59	189.6	2.27E-03	0.00E 00	1022.5
19 10 27	248	15.33	21.81	300.0	5.72	195.2	2.67E-03	0.00E 00	1020.2
19 10 59	229	15.38	21.79	298.7	5.40	187.4	1.64E-03	0.00E 00	1020.9
19 11 31	207	15.38	21.88	300.2	5.69	179.6	2.53E-03	0.00E 00	1021.7
19 12 3	205	15.59	21.82	300.0	5.68	190.8	2.65E-03	0.00E 00	1021.8
19 12 35	207	15.43	21.80	300.6	5.78	185.4	2.30E-03	0.00E 00	1021.7
19 13 7	213	15.43	21.79	300.1	5.69	189.7	2.07E-03	0.00E 00	1021.5
19 13 39	200	15.49	21.93	300.1	5.68	197.5	3.46E-03	0.00E 00	1022.0
19 14 11	210	15.38	21.92	300.1	5.65	185.4	3.33E-03	0.00E 00	1021.7
19 14 43	281	15.01	21.87	299.3	5.54	201.7	2.39E-03	0.00E 00	1019.0
19 15 15	200	15.35	21.93	299.8	5.57	188.0	3.37E-03	0.00E 00	1022.0
19 15 47	199	15.36	21.91	299.8	5.57	193.1	3.46E-03	0.00E 00	1022.0
19 16 19	209	15.38	21.82	300.1	5.66	205.8	2.66E-03	0.00E 00	1021.7
19 16 51	161	15.40	21.80	300.6	5.68	196.3	3.69E-03	0.00E 00	1023.5
19 17 23	240	15.06	21.74	301.3	5.92	205.4	3.27E-03	0.00E 00	1020.5
19 17 55	260	15.11	21.75	301.4	6.00	201.2	5.93E-03	0.00E 00	1019.8
19 18 27	214	15.34	21.83	301.1	5.88	210.3	4.14E-03	0.00E 00	1021.5
19 18 59	176	15.32	21.87	300.6	5.69	205.3	2.21E-03	0.00E 00	1022.9
19 19 30	181	15.24	21.71	300.5	5.66	203.2	3.27E-03	0.00E 00	1022.7
19 20 2	187	15.11	21.53	301.8	5.92	208.3	1.92E-03	0.00E 00	1022.5
19 20 34	216	15.11	21.49	300.6	5.73	217.8	4.15E-03	0.00E 00	1021.4
19 21 6	203	15.11	21.38	300.5	5.67	206.8	2.76E-03	0.00E 00	1021.9
19 21 38	207	15.16	21.41	300.4	5.66	211.4	2.72E-03	0.00E 00	1021.8
19 22 10	197	15.06	21.41	300.1	5.56	196.9	3.12E-03	0.00E 00	1022.1
19 22 42	204	15.03	21.44	301.4	5.86	192.4	4.18E-03	0.00E 00	1021.9
19 23 14	219	14.96	21.53	301.7	5.93	199.6	3.87E-03	0.00E 00	1021.3
19 23 46	196	15.14	21.56	302.3	6.06	204.2	5.38E-03	0.00E 00	1022.2
19 24 18	174	15.08	21.49	301.3	5.79	193.4	2.73E-03	0.00E 00	1023.0
19 24 50	182	14.94	21.23	301.6	5.83	199.1	3.02E-03	0.00E 00	1022.7
19 25 22	204	14.83	21.22	301.5	5.83	194.2	3.51E-03	0.00E 00	1021.9

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
19 25 54	150	15.01	21.16	302.2	5.91	202.3	3.65E-03	0.00E 00	1023.9
19 26 26	202	14.77	21.13	300.5	5.58	190.6	3.62E-03	0.00E 00	1021.9
19 26 58	190	14.78	21.16	302.6	6.02	195.3	3.06E-03	0.00E 00	1022.4
19 27 30	202	14.76	21.24	301.3	5.75	196.8	3.13E-03	0.00E 00	1021.9
19 28 2	257	14.26	21.19	300.4	5.56	189.1	2.14E-03	0.00E 00	1019.9
19 28 34	265	14.45	20.96	301.4	5.84	190.4	3.43E-03	0.00E 00	1019.6
19 29 6	212	14.77	20.53	300.3	5.55	193.3	3.82E-03	0.00E 00	1021.6
19 29 38	185	14.74	20.53	300.9	5.64	194.5	2.80E-03	0.00E 00	1022.6
19 30 10	202	14.59	20.43	301.6	5.78	201.0	4.51E-03	0.00E 00	1021.9
19 30 42	201	14.50	20.29	301.5	5.73	189.4	2.95E-03	0.00E 00	1022.0
19 31 14	176	14.65	20.34	301.3	5.67	185.9	2.64E-03	0.00E 00	1022.9
19 31 46	192	14.57	20.09	301.3	5.83	195.0	4.88E-03	0.00E 00	1022.3
19 32 18	186	14.62	19.98	302.3	5.90	191.1	3.78E-03	0.00E 00	1022.5
19 32 50	186	14.52	20.17	301.3	5.66	184.6	2.48E-03	0.00E 00	1022.5
19 33 22	183	14.54	20.18	301.4	5.67	194.1	2.80E-03	0.00E 00	1022.6
19 33 54	195	14.46	20.11	301.3	5.67	189.0	3.09E-03	0.00E 00	1022.2
19 34 26	181	14.63	20.02	302.6	5.97	192.9	3.61E-03	0.00E 00	1022.7
19 34 58	171	14.64	19.92	302.7	5.93	198.1	3.46E-03	0.00E 00	1023.1
19 35 30	221	14.44	19.93	302.0	5.89	195.2	4.00E-03	0.00E 00	1021.2
19 36 2	226	14.38	19.88	301.5	5.75	185.8	2.85E-03	0.00E 00	1021.0
19 36 34	240	14.34	19.89	301.0	5.68	183.0	3.34E-03	0.00E 00	1020.5
19 37 6	198	14.58	19.86	302.0	5.86	182.8	5.38E-03	0.00E 00	1022.1
19 37 38	203	14.64	19.77	300.8	5.61	190.0	3.46E-03	0.00E 00	1021.9
19 38 9	197	14.47	19.65	301.4	5.70	190.1	3.11E-03	0.00E 00	1022.1
19 38 41	219	14.42	19.54	302.2	5.91	189.5	2.97E-03	0.00E 00	1021.3
19 39 13	205	14.44	19.59	301.9	5.83	185.2	2.88E-03	0.00E 00	1021.8
19 39 45	191	14.49	19.65	301.8	5.77	190.6	2.27E-03	0.00E 00	1022.3
19 40 17	206	14.50	19.53	302.1	5.87	200.7	3.23E-03	0.00E 00	1021.8
19 40 49	156	14.60	19.64	301.8	5.73	196.9	1.98E-03	0.00E 00	1023.6
19 41 21	190	14.36	19.52	301.8	5.75	190.6	3.10E-03	0.00E 00	1022.4
19 41 53	192	14.32	19.41	301.4	5.65	184.5	2.87E-03	0.00E 00	1022.3
19 42 25	180	14.30	19.19	303.8	6.15	203.3	3.10E-03	0.00E 00	1022.7
19 42 57	181	14.35	19.09	301.6	5.63	227.9	2.28E-03	0.00E 00	1022.7
19 43 29	162	14.32	18.97	301.7	5.65	226.6	1.98E-03	0.00E 00	1023.4
19 44 1	184	14.25	18.88	304.7	6.34	237.7	2.55E-03	0.00E 00	1022.6
19 44 33	190	14.20	18.90	303.9	6.17	288.9	3.02E-03	0.00E 00	1022.4

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
19 45 5	210	14.10	18.67	303.3	6.06	318.6	2.44E-03	0.00E 00	1021.6
19 45 37	172	14.12	18.41	302.7	5.83	272.0	2.25E-03	0.00E 00	1023.0
19 46 9	177	13.92	18.30	304.5	6.19	238.1	1.92E-03	0.00E 00	1022.9
19 46 41	151	14.19	18.21	304.3	6.17	277.8	2.13E-03	0.00E 00	1023.8
19 47 13	188	14.12	17.77	303.7	6.09	220.2	1.93E-03	0.00E 00	1022.4
19 47 45	175	14.22	17.60	304.9	6.37	201.0	2.18E-03	0.00E 00	1022.9
19 48 17	177	14.27	17.60	302.8	5.91	201.4	1.46E-03	0.00E 00	1022.8
19 48 49	185	14.26	17.60	302.7	5.90	163.2	1.96E-03	0.00E 00	1022.6
19 49 21	199	14.30	17.72	302.5	5.89	152.4	3.06E-03	0.00E 00	1022.0
19 49 53	200	14.30	17.79	301.4	5.66	207.7	1.69E-03	0.00E 00	1022.0
19 50 25	194	14.33	18.62	302.6	5.92	248.8	2.43E-03	0.00E 00	1022.2
19 50 57	201	14.31	18.86	302.2	5.84	264.3	2.88E-03	0.00E 00	1022.0
19 51 29	264	14.21	19.00	301.6	5.84	256.9	3.26E-03	0.00E 00	1019.6
19 52 1	543	13.33	18.79	300.6	5.99	215.5	3.03E-03	0.00E 00	1009.4
19 52 33	823	12.26	18.75	297.7	5.68	147.6	5.77E-04	0.00E 00	999.2
19 53 5	1092	11.44	18.67	294.5	5.37	103.8	7.55E-05	0.00E 00	989.6
19 53 37	1388	10.61	18.45	292.5	5.35	95.5	1.23E-04	0.00E 00	979.0
19 54 8	1730	9.69	18.48	290.3	5.39	82.2	2.32E-04	0.00E 00	966.8
19 54 40	2058	8.79	18.53	287.8	5.31	82.9	1.02E-04	0.00E 00	955.3
19 55 12	2358	8.20	18.45	288.6	5.96	64.2	1.16E-04	0.00E 00	944.9
19 55 44	2627	8.37	18.23	284.5	5.66	56.0	9.80E-05	0.00E 00	935.6
19 56 16	2861	9.07	18.23	276.6	4.60	32.0	5.78E-05	0.00E 00	927.6
19 56 48	3218	9.74	18.36	267.4	3.50	6.9	3.77E-05	0.00E 00	915.5
19 57 20	3516	10.24	18.46	259.9	2.58	6.6	2.83E-05	0.00E 00	905.5
19 57 52	3836	10.38	18.29	253.8	1.92	6.4	3.01E-05	0.00E 00	894.9
19 58 24	4116	10.37	18.16	249.0	1.44	5.3	2.62E-05	0.00E 00	885.6
19 58 56	4421	10.31	18.37	246.2	1.51	3.5	2.61E-05	0.00E 00	875.7
19 59 28	4757	11.65	17.91	240.0	0.35	4.4	2.56E-05	0.00E 00	864.3
20 0 0	5076	12.05	17.89	235.1	0.58	7.7	2.14E-05	0.00E 00	854.6
20 0 32	5420	13.55	17.61	230.1	0.39	4.6	3.47E-05	0.00E 00	843.6
20 1 4	5702	14.20	17.31	226.5	0.24	3.3	2.40E-05	0.00E 00	834.8
20 1 36	6089	14.49	17.34	222.9	0.21	1.0	2.43E-05	0.00E 00	822.7
20 2 8	6537	13.81	17.27	220.4	0.36	-0.9	2.30E-05	0.00E 00	809.0
20 2 40	6836	13.55	17.51	218.5	0.45	-1.4	2.46E-05	0.00E 00	799.9
20 3 12	7233	13.35	17.42	215.6	0.49	-1.1	2.78E-05	0.00E 00	787.9

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
20 3 44	7608	13.43	17.30	212.5	0.48	0.4	3.52E-05	0.00E 00	776.8
20 4 16	8003	13.11	17.22	209.9	0.55	0.3	5.96E-05	0.00E 00	765.2
20 4 48	8426	12.32	17.42	208.3	0.79	-1.1	5.29E-05	0.00E 00	753.0
20 5 20	8737	11.71	17.46	207.4	1.04	-1.0	6.75E-05	0.00E 00	744.0
20 5 52	9124	10.54	17.39	206.6	1.31	-1.3	5.56E-05	0.00E 00	733.1
20 6 24	9435	9.87	17.52	205.7	1.53	-1.4	3.81E-05	0.00E 00	724.4
20 6 56	9763	8.97	17.52	204.8	1.72	-2.6	4.42E-05	0.00E 00	715.3



NOTE: Numbers give time in Central Standard Time

Figure B-12. Flight 12 Flight Track

FLIGHT# 12 13DEC78

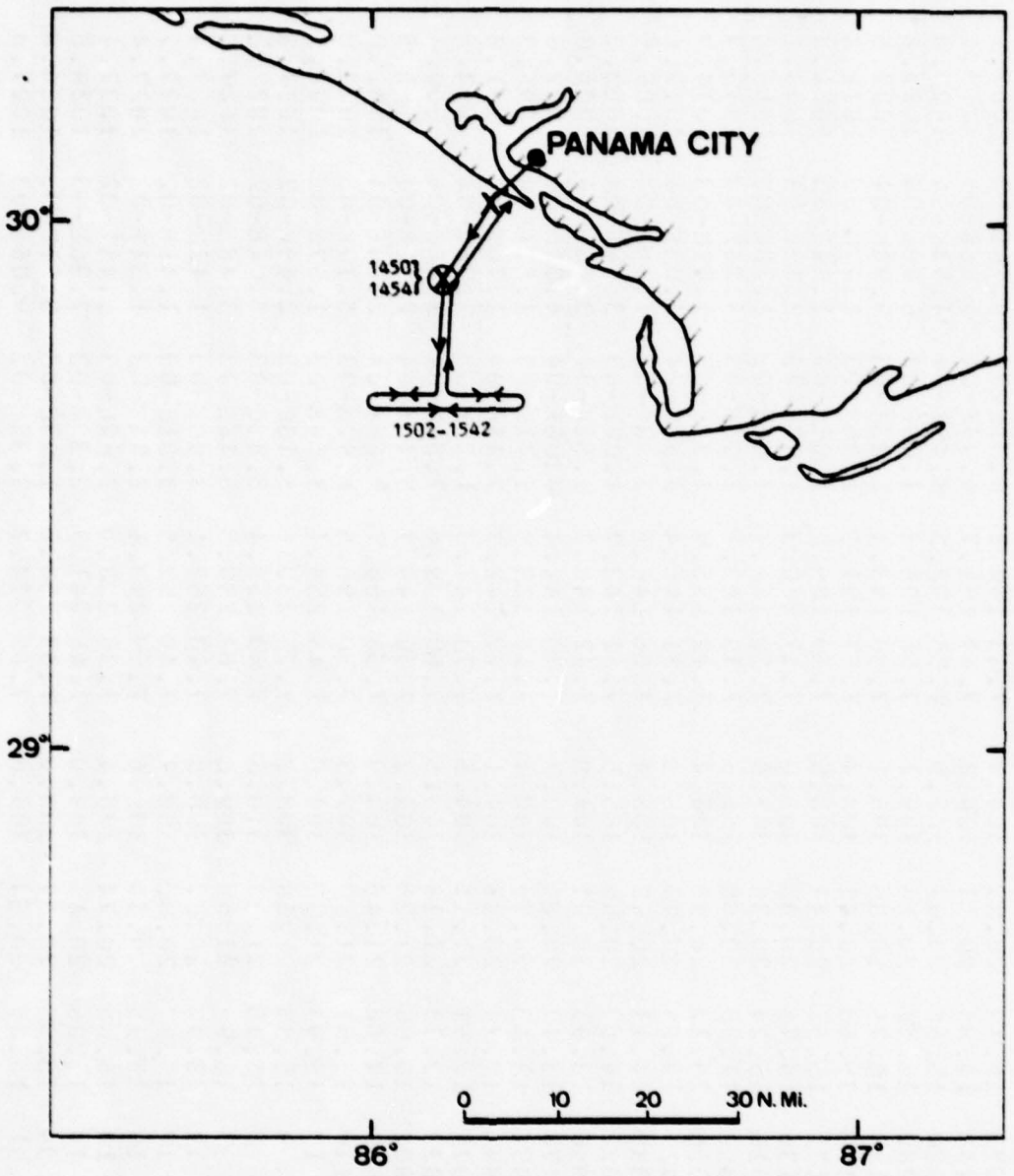
Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
11 53 46	104	14.34	20.94	308.2	6.89	233.3	2.88E-03	4.31E-03	1026.7
11 54 18	59	14.47	21.17	307.9	6.76	237.5	2.71E-03	6.59E-03	1028.4
11 54 50	6	14.87	21.95	309.8	7.18	248.1	8.04E-03	3.14E-02	1030.4
11 55 22	9	14.82	21.96	308.8	6.95	247.5	5.11E-03	2.69E-02	1030.3
11 55 54	9	14.94	22.13	307.9	6.78	242.7	6.83E-03	2.76E-02	1030.3
11 56 26	7	15.08	22.11	308.2	6.87	244.5	6.80E-03	2.91E-02	1030.4
11 56 58	18	14.99	21.99	306.8	6.57	222.8	5.05E-03	2.39E-02	1029.9
11 57 30	22	14.98	21.97	308.2	6.87	229.2	4.66E-03	2.07E-02	1029.8
11 58 2	15	15.05	22.03	309.0	7.06	222.3	5.62E-03	2.48E-02	1030.0
11 58 34	17	14.96	21.95	308.8	7.00	219.4	3.62E-03	2.06E-02	1030.0
11 59 5	18	15.02	22.25	310.4	7.37	252.6	7.05E-03	2.51E-02	1029.9
11 59 37	32	14.95	22.38	309.5	7.19	249.7	4.23E-03	1.77E-02	1029.4
12 0 9	39	14.88	22.33	308.5	6.95	249.9	2.67E-03	9.37E-03	1029.1
12 0 41	36	14.85	22.32	308.3	6.91	232.4	2.74E-03	1.05E-02	1029.3
12 1 13	36	14.98	22.31	309.6	7.21	257.5	3.46E-03	1.24E-02	1029.3
12 1 45	44	14.94	22.16	309.0	7.10	247.7	3.00E-03	8.06E-03	1029.0
12 2 17	60	14.94	22.01	310.0	7.35	255.3	4.33E-03	1.11E-02	1028.4
12 2 49	62	14.83	22.11	309.7	7.27	258.0	2.28E-03	9.11E-03	1028.3
12 3 21	57	14.90	22.07	310.1	7.37	281.0	3.54E-03	7.99E-03	1028.5
12 3 53	63	14.83	21.96	308.9	7.08	277.1	2.71E-03	6.69E-03	1028.2
12 4 25	55	14.86	21.85	310.3	7.40	273.5	1.71E-03	6.24E-03	1028.5
12 4 57	30	14.95	21.91	309.6	7.21	287.5	4.12E-03	1.60E-02	1029.5
12 5 29	7	15.30	21.75	309.5	7.22	297.8	6.72E-03	3.59E-02	1030.3
12 6 1	9	15.26	21.66	309.2	7.15	331.4	9.13E-03	2.98E-02	1030.3
12 6 33	10	15.21	21.63	311.2	7.58	347.3	5.09E-03	2.79E-02	1030.2
12 7 5	11	15.06	21.55	310.1	7.30	330.6	5.97E-03	2.79E-02	1030.2
12 7 37	33	15.03	21.33	308.9	7.08	302.9	3.82E-03	1.87E-02	1029.4
12 8 9	31	14.87	21.11	308.8	7.02	181.0	3.63E-03	1.34E-02	1029.4
12 8 41	22	15.01	21.40	308.4	6.92	337.7	3.70E-03	1.69E-02	1029.8
12 9 13	22	15.07	21.37	308.1	6.89	348.1	4.57E-03	1.69E-02	1029.8
12 9 45	21	15.17	21.52	309.1	7.14	313.2	5.25E-03	2.18E-02	1029.8
12 10 17	28	15.18	21.71	309.5	7.23	301.9	5.08E-03	2.02E-02	1029.6
12 10 49	36	15.00	21.68	307.4	6.74	301.9	3.27E-03	1.35E-02	1029.3
12 11 21	39	15.00	21.72	308.9	7.08	284.5	3.28E-03	1.24E-02	1029.1
12 11 53	43	15.01	21.71	308.2	6.93	280.8	3.64E-03	1.39E-02	1029.0

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 12 25	39	14.89	21.80	309.7	7.22	276.0	3.43E-03	1.25E-02	1029.2
12 12 57	92	14.76	21.85	308.8	7.12	257.4	2.86E-03	7.35E-03	1027.2
12 13 29	83	14.79	21.81	308.8	7.10	261.5	2.53E-03	3.99E-03	1027.5
12 14 1	88	14.68	21.76	308.3	6.98	237.4	1.95E-03	3.11E-03	1027.3
12 14 33	81	14.80	21.84	309.0	7.15	238.6	2.44E-03	3.77E-03	1027.6
12 15 4	97	14.73	21.83	307.5	6.84	236.0	2.24E-03	3.66E-03	1027.0
12 15 36	157	14.61	21.76	307.9	7.03	226.0	1.49E-03	1.38E-03	1024.8
12 16 8	189	14.43	21.75	307.9	7.03	230.2	1.77E-03	1.23E-03	1023.6
12 16 40	199	14.41	21.63	307.4	6.94	223.9	1.72E-03	1.64E-03	1023.2
12 17 12	196	14.44	21.69	307.8	7.04	233.1	1.71E-03	1.50E-03	1023.3
12 17 44	285	14.48	21.51	307.2	7.10	245.7	2.34E-03	2.34E-03	1020.0
12 18 16	262	14.62	21.28	307.9	7.25	245.9	2.19E-03	2.74E-03	1020.9
12 18 48	208	14.51	21.25	307.7	7.07	254.3	1.19E-03	1.57E-03	1022.9
12 19 20	228	14.25	21.16	306.5	6.77	260.1	1.25E-03	1.59E-03	1022.2
12 19 52	301	13.95	20.82	306.9	6.95	249.0	1.61E-03	7.10E-04	1019.5
12 20 24	292	14.01	20.77	306.2	6.79	251.3	2.24E-03	1.23E-03	1019.8
12 20 56	309	13.94	20.77	305.9	6.74	251.1	1.49E-03	1.14E-03	1019.2
12 21 28	310	13.99	20.70	306.1	6.80	255.3	2.15E-03	1.34E-03	1019.1
12 22 0	413	13.79	20.70	305.3	6.80	255.8	1.92E-03	9.80E-04	1015.3
12 22 32	502	13.45	20.58	303.5	6.50	246.8	1.55E-03	6.22E-04	1012.1
12 23 4	525	13.46	20.68	303.4	6.52	268.6	1.52E-03	4.34E-04	1011.2
12 23 36	535	13.44	20.65	304.9	6.83	273.7	1.77E-03	7.68E-04	1010.9
12 24 8	497	13.59	20.65	304.1	6.66	269.2	1.32E-03	5.80E-04	1012.2
12 24 40	658	13.06	20.36	303.6	6.77	230.7	1.49E-03	4.78E-04	1006.4
12 25 12	761	12.63	20.32	303.3	6.81	214.5	9.07E-04	3.09E-04	1002.6
12 25 44	760	12.70	20.72	302.7	6.70	223.5	1.14E-03	3.49E-04	1002.7
12 26 16	761	12.79	20.81	302.2	6.61	226.0	1.25E-03	2.12E-04	1002.6
12 26 48	759	12.85	20.91	303.4	6.88	224.9	1.69E-03	2.22E-04	1002.7
12 27 20	797	12.73	20.96	302.3	6.69	216.5	7.21E-04	2.87E-04	1001.3
12 27 52	990	12.12	20.85	301.5	6.79	184.8	1.39E-03	4.46E-04	994.3
12 28 23	1012	12.01	20.99	302.0	6.91	182.0	1.03E-03	1.71E-04	993.5
12 28 55	1004	12.08	21.09	301.5	6.79	167.5	1.24E-03	1.97E-04	993.8
12 29 27	990	12.21	21.45	301.5	6.80	178.9	1.02E-03	3.50E-04	994.3
12 29 59	1014	12.12	21.62	302.3	7.01	168.5	1.32E-03	3.72E-04	993.5
12 30 31	1191	11.52	21.48	300.3	6.79	166.8	5.25E-04	3.16E-04	987.1

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 31 3	1421	10.89	21.30	299.0	6.83	130.2	7.18E-04	5.77E-04	978.9
12 31 35	1517	10.59	21.14	300.3	7.24	111.4	1.51E-03	1.21E-03	975.5
12 32 7	1512	10.74	21.53	299.0	6.99	126.1	7.19E-04	7.14E-04	975.6
12 32 39	1472	10.81	21.56	299.5	7.03	133.2	7.60E-04	9.50E-04	977.0
12 33 11	1460	10.89	21.67	300.0	7.14	125.2	1.15E-03	2.17E-04	977.5
12 33 43	1560	10.67	21.43	299.0	7.09	118.1	9.81E-04	3.08E-04	973.9
12 34 15	1841	10.04	21.30	293.8	6.39	93.6	1.39E-03	3.05E-03	964.0
12 34 47	2021	9.80	21.42	291.2	6.14	76.0	1.19E-03	1.01E-02	957.7
12 35 19	2051	10.63	21.61	2d2.0	4.42	32.9	8.88E-04	5.88E-03	956.6
12 35 51	1988	10.36	21.68	289.1	5.77	49.5	1.12E-03	8.32E-03	958.8
12 36 23	1960	11.28	21.60	279.5	3.84	34.3	1.29E-04	5.93E-03	959.8
12 36 55	2054	10.91	21.43	281.2	4.33	23.6	3.99E-04	2.45E-03	956.5
12 37 27	2048	11.03	20.97	281.1	4.31	22.9	2.41E-04	2.74E-03	956.7
12 37 59	2017	11.13	21.23	278.1	3.62	22.5	3.19E-04	4.39E-03	957.8
12 38 31	2335	11.29	20.96	272.9	3.19	17.3	1.41E-05	2.82E-04	946.7
12 39 3	2736	11.56	20.82	264.2	2.18	17.2	1.10E-05	1.48E-04	932.9
12 39 35	2979	11.71	20.55	259.7	1.72	16.6	7.80E-06	1.00E-04	924.6
12 40 7	2943	11.91	20.75	259.1	1.56	17.1	5.17E-06	9.46E-05	925.8
12 40 39	2972	11.72	20.58	259.0	1.56	20.6	5.31E-06	6.04E-05	924.8
12 41 11	3007	11.70	20.60	258.8	1.56	21.5	5.78E-06	5.97E-05	923.6
12 41 42	3002	12.34	20.66	257.9	1.49	18.2	6.57E-06	1.08E-04	923.8
12 42 14	3285	13.08	20.69	253.1	1.17	14.8	1.09E-05	1.30E-04	914.2
12 42 46	3738	12.87	20.25	247.2	0.74	10.2	1.47E-05	9.76E-05	899.0
12 43 18	4128	12.35	20.18	244.2	0.75	8.6	1.03E-05	1.38E-04	886.1
12 43 50	4474	12.02	20.28	241.9	0.84	10.1	8.42E-05	8.82E-04	874.8
12 44 22	4848	13.00	20.50	237.9	0.87	11.7	3.52E-05	7.11E-04	862.7
12 44 54	4950	12.79	20.56	236.9	0.81	12.1	3.53E-05	2.50E-04	859.4
12 45 26	4939	12.69	20.71	236.3	0.64	15.2	9.83E-06	2.61E-04	859.8
12 45 58	4954	12.76	20.73	236.3	0.68	15.4	3.00E-05	5.10E-04	859.3
12 46 30	4903	12.72	20.69	236.3	0.74	13.7	2.08E-05	2.35E-04	858.0
12 47 2	5040	12.81	20.89	236.0	0.78	13.4	1.45E-05	4.26E-04	856.5
12 47 34	5325	12.35	21.08	235.0	1.03	12.3	1.22E-05	1.10E-04	847.5
12 48 6	5510	12.14	21.25	234.3	1.18	12.6	1.01E-05	6.48E-05	841.6
12 48 38	5416	12.21	21.30	234.1	0.97	14.4	8.78E-06	7.78E-05	844.6
12 49 10	5203	10.96	12.39	173.6	-12.74	9.1	1.78E 02	2.29E-02	851.3
12 49 42	4713	12.56	17.65	160.0	-16.51	15.9	4.29E 01	2.42E-02	867.0

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
12 50 14	4018	13.28	21.69	243.2	0.48	19.8	7.03E-04	4.21E-03	889.7
12 50 46	3485	12.98	21.64	251.1	1.11	20.0	1.16E-05	3.42E-04	907.5
12 51 18	2882	11.92	21.59	262.4	2.14	21.4	6.03E-06	1.27E-04	927.9
12 51 50	2097	11.31	21.63	283.5	5.01	39.0	2.19E-04	8.47E-04	955.0
12 52 21	1223	12.46	21.94	298.2	6.65	135.8	6.02E-04	6.05E-04	986.0
12 52 53	607	14.05	22.34	301.3	6.40	200.4	8.36E-04	2.56E-04	1008.2
12 53 25	287	14.66	21.93	303.7	6.39	230.5	9.79E-04	6.34E-04	1020.0
12 53 57	163	15.09	21.69	305.4	6.59	278.5	1.74E-03	2.00E-03	1024.6
12 54 29	193	14.88	21.46	303.5	6.18	270.1	1.12E-03	1.97E-03	1023.5
12 55 1	242	14.56	21.37	304.4	6.40	269.6	1.90E-03	1.35E-03	1021.6
12 55 33	264	14.45	21.31	304.1	6.36	250.7	1.02E-03	1.41E-03	1020.8
12 56 5	280	14.42	21.27	303.9	6.34	248.4	1.02E-03	1.36E-03	1020.2
12 56 37	202	14.76	21.29	306.0	6.73	262.4	2.28E-03	1.57E-03	1023.1
12 57 9	146	15.07	21.28	304.7	6.40	266.6	1.98E-03	3.54E-03	1025.2
12 57 41	69	15.30	21.39	306.9	6.78	249.8	2.87E-03	1.06E-02	1028.1
12 58 13	57	15.18	21.30	306.0	6.52	241.0	2.99E-03	1.24E-02	1028.5
12 58 45	66	15.12	20.58	306.3	6.60	231.7	3.32E-03	1.18E-02	1028.1
12 59 17	61	15.01	20.49	307.1	6.72	222.0	3.12E-03	7.20E-03	1028.3
12 59 49	63	15.13	20.28	308.1	6.98	226.0	3.07E-03	9.09E-03	1028.3
13 0 21	134	14.98	20.10	305.8	6.60	250.8	1.90E-03	3.34E-03	1025.6
13 0 53	123	14.97	20.23	306.3	6.67	221.9	2.69E-03	4.22E-03	1026.1
13 1 25	86	15.23	20.33	305.6	6.52	216.6	2.44E-03	7.90E-03	1027.4
13 1 57	325	13.99	17.02	276.5	0.27	191.4	8.27E 00	1.93E-02	1018.6
13 2 29	601	13.78	19.92	297.6	5.51	170.4	1.18E-03	5.33E-03	1008.5
13 3 0	959	12.84	19.66	300.3	6.64	148.2	3.35E-01	1.65E-02	995.5
13 3 32	1250	12.13	19.60	297.2	6.40	127.1	1.00E-03	5.79E-04	985.0
13 4 4	1378	11.87	19.62	296.6	6.48	121.8	5.47E-04	6.08E-04	980.4
13 4 36	1400	12.07	19.67	295.8	6.40	102.1	1.10E-03	5.29E-04	979.6
13 5 8	1484	12.21	19.78	292.2	5.82	96.0	8.24E-04	2.47E-04	976.6
13 5 40	1618	11.95	19.45	289.9	5.53	99.6	1.12E-04	1.21E-04	971.9
13 6 12	1578	12.43	19.39	287.9	5.13	115.7	1.79E-04	2.15E-04	973.3
13 6 44	1498	11.43	9.75	204.0	-13.49	114.8	1.13E 02	4.16E-02	976.1
13 7 16	1269	12.67	13.16	253.3	-3.65	116.5	6.22E 01	4.33E-02	984.3
13 7 48	1087	14.09	22.17	283.8	4.68	129.5	2.39E 01	1.42E-03	990.8

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
13 8 20	1110	13.32	30.53	288.8	4.55	135.4	1.46E-02	-6.61E-03	990.0
13 8 52	960	14.31	14.96	289.9	4.70	126.6	5.15E-03	3.10E-03	995.4
13 9 24	803	14.61	15.87	291.1	4.71	117.5	2.22E-04	2.29E-04	1001.1
13 9 56	764	14.75	14.87	291.9	4.84	120.3	1.80E-04	1.61E-04	1002.5
13 10 28	746	13.90	14.43	259.4	-2.60	118.9	2.83E 01	3.54E-03	1003.2
13 11 0	706	14.47	19.84	295.5	5.44	129.0	2.32E-03	1.33E-03	1004.6
13 11 32	376	15.20	21.14	297.3	5.28	146.2	5.29E-03	2.04E-03	1016.7
13 12 4	59	16.27	24.42	299.9	5.44	188.7	6.61E-02	8.79E-02	1028.4
13 12 36	60	15.47	27.55	298.8	5.00	273.7	4.32E 00	1.61E-01	1028.4
13 13 8	69	15.94	25.91	299.2	5.22	215.9	1.84E-02	1.17E-01	1028.1



NOTE: Numbers give time in Central Standard Time

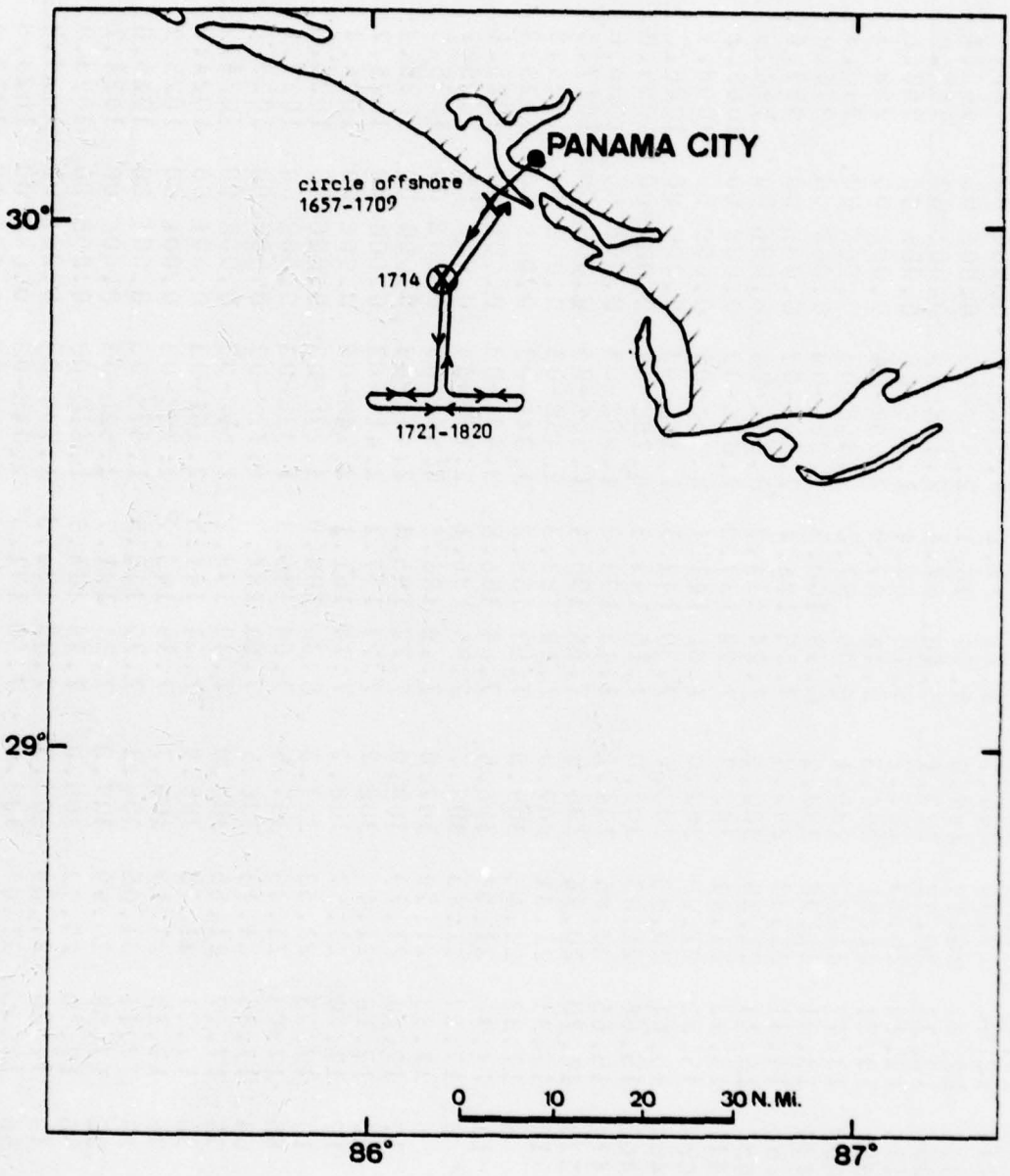
Figure B-13. Flight 13 Flight Track

FLIGHT# 13 13DEC78

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
14 50 17	954	14.46	19.81	299.6	7.03	113.8	2.53E-03	4.39E-03	993.2
14 50 49	572	15.12	20.02	304.4	7.43	142.2	8.01E-04	9.16E-04	1007.1
14 51 21	263	15.85	20.11	306.8	7.47	181.7	8.99E-04	6.86E-04	1018.4
14 51 53	220	15.60	20.07	306.9	7.35	192.6	8.45E-04	4.53E-04	1020.0
14 52 25	202	15.58	20.16	308.1	7.56	196.9	1.09E-03	6.68E-04	1020.6
14 52 57	153	15.75	20.35	308.1	7.50	193.4	1.23E-03	9.94E-04	1022.5
14 53 29	159	15.69	20.41	308.4	7.57	191.2	1.25E-03	1.47E-03	1022.2
14 54 1	171	15.58	20.41	308.5	7.59	189.8	1.65E-03	1.34E-03	1021.8
14 54 33	136	15.78	20.35	308.6	7.57	180.3	1.47E-03	2.12E-03	1023.1
14 55 5	316	15.14	20.38	307.5	7.58	164.7	1.46E-03	1.20E-03	1016.4
14 55 37	390	14.90	20.86	306.3	7.39	143.1	1.08E-03	3.23E-03	1013.7
14 56 9	358	15.12	20.98	306.4	7.42	155.9	1.37E-03	1.02E-03	1014.9
14 56 41	421	14.65	20.97	305.9	7.31	146.4	8.97E-04	4.03E-04	1012.6
14 57 13	589	14.11	20.62	306.4	7.66	146.6	2.38E-03	4.39E-04	1006.5
14 57 45	622	14.02	20.65	305.5	7.51	143.7	1.06E-03	3.54E-04	1005.2
14 58 17	656	13.93	20.91	304.9	7.42	146.7	9.52E-04	3.68E-04	1004.0
14 58 49	778	13.47	20.84	303.7	7.30	142.4	8.06E-04	4.02E-04	999.6
14 59 21	896	13.13	20.79	302.4	7.18	138.9	5.71E-04	1.52E-04	995.3
14 59 53	994	12.79	20.88	304.1	7.67	142.3	7.41E-04	1.70E-04	991.8
15 0 25	970	12.91	21.11	304.5	7.73	141.3	1.29E-03	2.88E-04	992.6
15 0 56	1033	12.73	21.19	303.5	7.60	139.6	7.85E-04	3.46E-04	990.4
15 1 28	1002	12.86	21.29	302.2	7.30	144.7	5.48E-04	2.71E-04	991.5
15 2 0	686	14.00	21.46	304.9	7.50	156.7	9.66E-04	2.84E-04	1002.9
15 2 32	116	15.81	21.67	307.5	7.30	198.5	1.92E-03	5.17E-03	1023.8
15 3 4	17	15.93	21.67	309.0	7.45	254.6	3.54E-03	1.57E-02	1027.5
15 3 36	9	15.93	21.58	308.2	7.25	238.6	5.13E-03	2.49E-02	1027.8
15 4 8	7	15.95	21.33	310.8	7.83	256.4	5.83E-03	3.04E-02	1027.8
15 4 40	7	15.99	21.08	309.8	7.63	237.5	6.16E-03	3.48E-02	1027.8
15 5 12	19	15.90	20.82	308.8	7.40	267.1	3.00E-03	1.41E-02	1027.4
15 5 44	17	15.97	20.82	308.7	7.40	252.5	3.21E-03	1.46E-02	1027.5
15 6 16	19	15.95	20.74	309.6	7.59	243.1	2.94E-03	1.34E-02	1027.4
15 6 48	19	16.08	20.74	308.4	7.36	228.0	2.62E-03	1.41E-02	1027.4
15 7 20	44	15.86	20.41	309.0	7.48	241.3	2.38E-03	7.38E-03	1026.5
15 7 52	34	15.98	20.57	308.2	7.33	254.6	1.93E-03	5.81E-03	1026.8
15 8 24	31	16.05	20.54	309.8	7.68	274.7	3.35E-03	9.06E-03	1027.0
15 8 55	30	16.19	20.36	306.3	6.95	206.7	1.82E-03	8.21E-03	1027.0

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 9 27	54	16.13	20.13	307.7	7.28	172.4	2.58E-03	7.45E-03	1026.1
15 9 59	71	16.07	20.15	306.2	6.97	199.5	2.18E-03	4.68E-03	1025.5
15 10 31	61	16.13	20.24	306.9	7.13	247.1	2.68E-03	7.52E-03	1025.9
15 11 3	56	16.09	20.41	306.3	6.98	235.2	1.37E-03	6.90E-03	1026.0
15 11 35	59	16.07	20.46	309.1	7.61	242.3	2.15E-03	5.60E-03	1025.9
15 12 7	69	15.96	20.51	308.1	7.36	239.7	1.59E-03	2.32E-03	1025.5
15 12 39	78	15.90	20.49	307.4	7.23	224.3	1.25E-03	2.84E-03	1025.2
15 13 11	93	15.79	20.54	307.4	7.21	230.7	1.48E-03	2.77E-03	1024.7
15 13 43	81	15.86	20.64	307.8	7.31	247.3	1.66E-03	3.22E-03	1025.1
15 14 15	78	15.81	20.92	307.4	7.19	244.4	1.52E-03	3.45E-03	1025.2
15 14 47	153	15.50	20.87	307.8	7.37	233.3	1.41E-03	1.47E-03	1022.4
15 15 19	188	15.34	20.89	307.8	7.41	222.8	1.51E-03	1.13E-03	1021.1
15 15 51	173	15.42	21.25	307.4	7.30	216.3	1.02E-03	8.64E-04	1021.7
15 16 23	188	15.39	21.21	308.0	7.46	218.9	1.49E-03	1.67E-03	1021.1
15 16 55	181	15.42	21.25	307.8	7.42	211.7	1.33E-03	9.05E-04	1021.4
15 17 27	304	14.95	21.10	306.2	7.21	195.7	1.25E-03	8.84E-04	1016.9
15 17 59	284	15.12	21.14	306.9	7.35	187.0	1.69E-03	1.00E-03	1017.6
15 18 31	281	15.11	21.23	307.2	7.41	204.7	1.36E-03	7.92E-04	1017.7
15 19 3	277	15.17	21.23	306.5	7.27	191.5	1.21E-03	1.03E-03	1017.9
15 19 35	278	15.06	21.05	306.5	7.25	205.5	9.90E-04	5.21E-04	1017.8
15 20 7	379	14.82	20.80	306.0	7.29	192.7	9.40E-04	3.09E-04	1014.1
15 20 39	506	14.42	20.36	305.9	7.44	182.4	1.63E-03	5.22E-04	1009.5
15 21 11	471	14.60	20.55	305.8	7.40	193.2	1.09E-03	5.80E-04	1010.7
15 21 43	479	14.66	20.42	304.8	7.20	193.1	8.05E-04	2.79E-04	1010.5
15 22 14	497	14.63	20.35	305.2	7.31	183.8	7.60E-04	9.92E-05	1009.8
15 22 46	664	14.23	20.13	303.2	7.14	157.5	1.22E-03	2.09E-04	1003.7
15 23 18	743	13.93	19.93	304.2	7.45	171.7	1.13E-03	3.45E-04	1000.8
15 23 50	827	14.11	19.88	302.4	7.23	154.1	1.05E-03	3.48E-04	997.8
15 24 22	812	14.21	19.91	301.2	7.01	156.2	8.84E-04	4.09E-04	998.4
15 24 54	792	13.96	19.86	302.7	7.23	149.7	1.46E-03	7.11E-04	999.1
15 25 26	910	13.61	17.14	279.8	2.35	160.8	3.85E 00	1.77E-02	994.8
15 25 58	1294	12.93	15.80	271.8	1.27	204.3	6.16E 00	1.95E-02	981.0
15 26 30	1481	12.53	10.66	203.8	-13.31	150.5	1.47E 01	6.29E-02	974.3
15 27 2	1541	12.26	8.70	181.7	-18.04	149.3	1.50E 01	9.01E-02	972.2

Time h/m/s	Alt ft	T Cent	Ts	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
15 27 34	1525	13.06	20.12	288.3	5.39	126.9	9.99E-06	3.35E-03	972.8
15 28 6	1457	13.25	20.33	288.5	5.35	156.2	3.32E-04	2.24E-03	975.2
15 28 38	1481	13.07	20.32	288.9	5.44	192.4	2.68E-04	6.57E-04	974.4
15 29 10	1453	12.69	20.35	291.5	5.87	220.3	2.06E-03	5.96E-03	975.4
15 29 42	1459	12.37	20.35	292.6	6.05	205.6	1.49E-03	3.54E-03	975.1
15 30 13	1622	12.57	20.23	287.2	5.26	204.0	5.32E-04	1.45E-03	969.3
15 30 45	1938	12.35	20.05	281.5	4.60	232.3	2.55E-05	2.35E-04	958.3
15 31 17	1958	12.01	20.41	282.4	4.78	188.0	1.57E-05	9.42E-05	957.5
15 31 49	1945	12.01	20.67	282.5	4.76	140.1	1.77E-04	1.27E-03	958.0
15 32 21	1928	11.99	20.97	282.1	4.63	111.9	9.72E-05	1.22E-03	958.6
15 32 53	1931	11.99	19.15	259.9	-0.19	92.1	2.16E 01	1.15E-02	958.5
15 33 25	1961	11.46	15.16	255.5	-1.19	93.8	2.23E 01	4.83E-02	957.4
15 33 57	2315	12.14	20.75	274.6	3.84	79.1	7.37E-05	2.21E-03	945.1
15 34 29	2775	13.48	20.41	260.2	1.92	14.1	4.22E-05	8.00E-04	929.3
15 35 1	2937	13.08	20.31	258.3	1.73	17.2	9.35E-06	7.05E-05	923.8
15 35 33	2905	13.35	20.55	257.3	1.50	16.3	1.77E-05	1.12E-04	924.9
15 36 5	2936	13.26	20.60	256.9	1.47	17.6	1.00E-05	4.58E-05	923.8
15 36 37	2953	13.34	20.71	256.5	1.43	18.2	1.08E-05	4.03E-05	923.2
15 37 9	3059	13.67	20.78	254.4	1.24	15.7	2.74E-04	2.11E-04	919.6
15 37 41	3581	13.92	20.60	247.6	0.83	19.5	5.60E-05	1.06E-03	902.1
15 38 12	4004	13.77	20.33	246.6	1.42	17.7	7.74E-05	2.95E-04	888.0
15 38 44	4360	13.80	20.12	244.3	1.62	17.4	1.84E-05	2.74E-04	876.4
15 39 16	4688	14.27	19.92	239.5	1.28	17.8	1.52E-05	1.72E-04	865.8
15 39 48	4934	14.34	15.89	228.6	-0.64	15.9	5.27E 00	1.96E-02	857.9
15 40 20	4943	14.67	19.91	236.4	1.16	15.4	2.40E-05	1.64E-03	857.6
15 40 52	4895	14.68	20.06	236.4	1.08	15.8	2.56E-05	3.68E-04	859.1
15 41 24	4899	14.26	20.03	237.7	1.28	14.2	8.88E-05	2.13E-03	859.0
15 41 56	4914	14.30	19.90	237.6	1.30	13.0	6.27E-05	9.20E-04	858.5
15 42 28	4893	14.24	19.73	237.4	1.22	12.5	6.40E-05	1.54E-03	859.2
15 43 0	4845	13.85	19.69	220.4	-2.72	11.6	1.51E 00	-5.85E-04	860.7



NOTE: Numbers give time in Central Standard Time

Figure B-14. Flight 14 Flight Track

FLIGHT# 14 13DEC78

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 12 30	3198	13.71	19.59	252.9	1.32	9.7	3.60E-05	0.00E 00	913.0
17 13 2	2744	12.68	19.90	266.2	3.11	23.1	3.54E-05	0.00E 00	928.4
17 13 34	2396	12.11	20.19	280.0	5.29	76.1	2.87E-05	0.00E 00	940.4
17 14 6	2206	12.33	20.32	282.1	5.40	87.4	2.12E-05	0.00E 00	947.0
17 14 38	2115	12.49	20.57	282.7	5.40	86.4	1.85E-05	0.00E 00	950.1
17 15 9	1881	13.21	21.01	284.5	5.46	87.9	2.63E-04	0.00E 00	958.3
17 15 41	1652	13.47	21.22	289.1	6.06	87.2	1.35E-03	0.00E 00	966.3
17 16 13	1434	13.81	21.28	293.2	6.58	100.3	2.25E-03	0.00E 00	974.0
17 16 45	1164	14.31	21.33	297.8	7.15	106.4	2.20E-03	0.00E 00	983.6
17 17 17	852	15.14	21.20	300.2	7.24	114.3	8.65E-04	0.00E 00	994.9
17 17 49	541	15.92	21.41	302.3	7.22	137.0	1.07E-03	0.00E 00	1006.1
17 18 21	488	15.82	21.20	302.0	7.01	141.4	8.46E-04	0.00E 00	1008.1
17 18 53	484	15.61	20.98	303.6	7.30	142.5	1.11E-03	0.00E 00	1008.2
17 19 25	462	15.65	21.03	303.0	7.15	143.3	6.75E-04	0.00E 00	1009.0
17 19 57	474	15.65	20.86	304.2	7.43	109.3	1.60E-03	0.00E 00	1008.6
17 20 29	230	16.70	20.96	306.5	7.69	135.4	1.36E-03	0.00E 00	1017.5
17 21 1	18	17.31	21.31	307.0	7.49	183.3	2.45E-03	0.00E 00	1025.3
17 21 33	8	17.32	21.45	309.0	7.93	185.2	3.34E-03	0.00E 00	1025.7
17 22 5	11	17.36	21.54	308.5	7.84	186.8	3.44E-03	0.00E 00	1025.6
17 22 37	8	17.27	21.63	308.7	7.85	186.6	2.73E-03	0.00E 00	1025.7
17 23 9	9	17.33	21.59	307.0	7.49	186.5	2.58E-03	0.00E 00	1025.7
17 23 41	17	17.28	21.70	308.0	7.72	195.1	2.47E-03	0.00E 00	1025.4
17 24 13	20	17.18	21.48	306.2	7.27	157.2	2.61E-03	0.00E 00	1025.2
17 24 45	17	17.20	21.57	308.2	7.74	161.1	2.14E-03	0.00E 00	1025.4
17 25 17	18	17.23	21.53	311.0	8.38	208.0	3.27E-03	0.00E 00	1025.3
17 25 48	65	17.03	21.39	307.5	7.64	186.8	1.32E-03	0.00E 00	1023.6
17 26 20	64	17.35	21.43	306.5	7.50	184.3	1.72E-03	0.00E 00	1023.6
17 26 52	36	17.27	21.55	306.0	7.30	170.1	1.59E-03	0.00E 00	1024.7
17 27 24	30	17.21	21.45	305.9	7.24	141.5	2.16E-03	0.00E 00	1024.9
17 27 56	26	17.15	21.17	306.7	7.39	143.2	1.73E-03	0.00E 00	1025.1
17 28 28	28	17.11	21.05	308.3	7.75	168.5	1.57E-03	0.00E 00	1025.0
17 29 0	52	17.06	20.99	307.0	7.51	181.7	1.52E-03	0.00E 00	1024.1
17 29 32	56	17.10	20.92	308.0	7.74	184.5	1.61E-03	0.00E 00	1023.9
17 30 4	49	17.20	21.09	308.3	7.83	184.3	1.79E-03	0.00E 00	1024.2
17 30 36	56	17.23	21.04	308.5	7.90	171.5	2.04E-03	0.00E 00	1023.9
17 31 8	98	16.99	20.90	306.0	7.35	167.3	1.21E-03	0.00E 00	1022.4

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 31 40	99	16.96	20.72	306.8	7.53	165.5	1.04E-03	0.00E 00	1022.3
17 32 12	88	17.02	20.52	307.7	7.74	181.5	2.01E-03	0.00E 00	1022.7
17 32 44	101	16.96	20.50	308.2	7.85	178.7	9.50E-04	0.00E 00	1022.3
17 33 16	123	16.87	20.47	307.6	7.76	171.1	1.11E-03	0.00E 00	1021.5
17 33 48	197	16.82	20.38	308.0	7.99	154.0	1.31E-03	0.00E 00	1018.7
17 34 20	184	16.73	20.44	307.7	7.86	171.6	1.28E-03	0.00E 00	1019.2
17 34 52	186	16.68	20.37	307.3	7.76	164.4	1.34E-03	0.00E 00	1019.2
17 35 24	185	16.64	20.44	307.0	7.69	164.7	1.44E-03	0.00E 00	1019.2
17 35 56	176	16.68	20.54	307.4	7.77	168.9	1.43E-03	0.00E 00	1019.5
17 36 27	288	16.36	20.58	306.0	7.61	160.1	1.14E-03	0.00E 00	1015.4
17 36 59	292	16.32	20.63	304.8	7.35	128.9	9.48E-04	0.00E 00	1015.2
17 37 31	305	16.18	20.74	304.9	7.36	134.5	1.08E-03	0.00E 00	1014.8
17 38 3	284	16.32	20.77	305.6	7.50	129.8	1.11E-03	0.00E 00	1015.5
17 38 35	297	16.37	20.86	305.8	7.60	142.7	8.59E-04	0.00E 00	1015.1
17 39 7	508	15.68	20.68	306.2	7.97	141.1	1.05E-03	0.00E 00	1007.3
17 39 39	480	15.88	20.88	303.9	7.45	135.5	1.60E-03	0.00E 00	1008.4
17 40 11	482	15.77	20.84	306.1	7.90	124.6	1.39E-03	0.00E 00	1008.3
17 40 43	514	15.64	20.71	305.5	7.82	126.8	9.89E-04	0.00E 00	1007.1
17 41 15	498	15.86	20.65	303.4	7.37	123.6	1.18E-03	0.00E 00	1007.7
17 41 47	677	15.24	20.46	302.8	7.45	117.2	9.62E-04	0.00E 00	1001.2
17 42 19	716	15.03	20.32	303.9	7.73	120.2	8.51E-04	0.00E 00	999.8
17 42 51	734	14.95	20.25	304.3	7.85	128.6	1.08E-03	0.00E 00	999.1
17 43 23	737	15.04	20.29	303.8	7.76	120.6	7.59E-04	0.00E 00	999.0
17 43 55	722	15.14	20.40	303.3	7.65	125.7	6.72E-04	0.00E 00	999.6
17 44 27	888	14.61	20.13	301.3	7.42	102.8	8.21E-04	0.00E 00	993.5
17 44 59	934	14.23	20.09	301.2	7.52	100.9	1.20E-03	0.00E 00	989.8
17 45 31	997	14.32	20.30	300.9	7.49	108.9	1.30E-03	0.00E 00	989.6
17 46 3	956	14.56	20.43	299.8	7.21	107.6	1.18E-03	0.00E 00	991.1
17 46 35	985	14.38	20.46	301.0	7.51	104.1	1.43E-03	0.00E 00	990.1
17 47 7	992	14.36	20.49	300.8	7.47	104.3	1.12E-03	0.00E 00	989.8
17 47 39	1210	13.94	20.46	295.2	6.60	99.0	1.59E-03	0.00E 00	982.0
17 48 11	1439	13.37	20.41	291.2	6.05	88.9	1.71E-03	0.00E 00	973.9
17 48 43	1477	13.28	20.70	290.8	6.02	83.7	1.47E-03	0.00E 00	972.5
17 49 15	1448	13.50	20.66	291.8	6.23	80.1	2.71E-03	0.00E 00	973.5
17 49 46	1432	13.36	21.00	293.0	6.43	85.2	9.96E-04	0.00E 00	974.1
17 50 18	1515	13.33	21.02	289.6	5.85	96.4	8.12E-04	0.00E 00	971.2

Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
17 50 50	1830	12.79	20.73	285.0	5.38	97.8	1.27E-04	0.00E 00	960.1
17 51 22	1921	12.58	20.78	283.9	5.27	68.9	3.93E-05	0.00E 00	956.9
17 51 54	1993	12.50	20.76	282.7	5.15	106.5	6.42E-05	0.00E 00	954.4
17 52 26	1957	12.62	20.94	283.9	5.35	101.5	2.06E-05	0.00E 00	955.6
17 52 58	1945	12.48	21.05	284.2	5.37	95.8	9.48E-06	0.00E 00	956.0
17 53 30	2040	12.16	21.04	284.8	5.62	93.6	1.28E-05	0.00E 00	952.7
17 54 2	2415	11.11	20.75	282.0	5.54	87.7	1.51E-05	0.00E 00	939.7
17 54 34	2712	12.36	20.58	263.1	2.29	29.3	4.63E-05	0.00E 00	929.5
17 55 6	2858	12.44	20.80	260.7	2.09	14.2	2.68E-05	0.00E 00	924.5
17 55 38	2952	12.33	20.61	259.7	2.03	13.3	2.53E-05	0.00E 00	921.4
17 56 10	2942	12.33	20.75	259.5	1.97	16.5	4.22E-05	0.00E 00	921.7
17 56 42	2919	12.34	20.97	259.4	1.91	15.8	1.28E-04	0.00E 00	922.5
17 57 14	2933	12.49	20.75	259.0	1.87	13.7	1.63E-04	0.00E 00	922.0
17 57 45	2949	12.09	20.60	259.0	1.82	16.8	5.14E-04	0.00E 00	921.5
17 58 17	3162	11.38	11.81	210.0	-8.53	14.6	1.89E 01	0.00E 00	914.3
17 58 49	3430	12.48	12.03	212.4	-7.33	12.1	1.25E 01	0.00E 00	905.3
17 59 21	3711	12.22	13.09	217.4	-5.71	15.1	3.06E 00	0.00E 00	895.9
17 59 53	4057	12.63	19.66	247.2	1.54	14.6	2.31E-05	0.00E 00	884.5
18 0 25	4328	12.81	19.59	246.2	1.88	14.0	2.12E-05	0.00E 00	875.6
18 0 57	4538	13.60	19.49	243.4	1.84	14.1	1.46E-05	0.00E 00	868.8
18 1 29	4821	13.75	19.43	240.6	1.80	12.3	8.27E-06	0.00E 00	859.7
18 2 1	4886	13.79	19.36	239.3	1.63	12.3	5.11E-06	0.00E 00	857.6
18 2 33	4914	13.83	19.52	238.5	1.52	10.7	4.62E-06	0.00E 00	856.7
18 3 5	4955	13.88	19.46	237.9	1.47	10.4	4.16E-06	0.00E 00	855.4
18 3 37	4912	14.11	19.42	237.9	1.43	11.9	5.14E-06	0.00E 00	856.8
18 4 9	4913	14.10	19.49	237.8	1.42	12.0	5.12E-06	0.00E 00	856.8
18 4 41	4908	14.03	19.56	237.8	1.39	9.7	4.93E-06	0.00E 00	856.9
18 5 13	5182	13.63	19.39	236.0	1.43	9.1	9.75E-06	0.00E 00	848.2
18 5 45	5567	14.11	19.08	232.0	1.37	8.4	2.02E-05	0.00E 00	836.1
18 6 17	5950	14.14	19.19	229.7	1.58	7.0	2.48E-05	0.00E 00	824.1
18 6 49	6238	13.67	19.30	228.5	1.75	6.9	9.95E-06	0.00E 00	815.2
18 7 21	6523	13.06	19.48	227.2	1.90	7.4	3.54E-05	0.00E 00	806.4
18 7 53	6846	12.15	19.40	225.9	2.02	7.8	1.23E-05	0.00E 00	796.7
18 8 24	7187	11.56	19.24	223.4	1.97	8.6	1.32E-05	0.00E 00	786.5
18 8 56	7454	11.26	19.18	221.8	2.04	8.7	3.69E-05	0.00E 00	778.6
18 9 28	7486	11.08	19.37	221.5	2.00	7.0	2.11E-05	0.00E 00	777.6
18 10 0	7499	10.99	19.66	221.2	1.95	6.8	4.30E-05	0.00E 00	777.2

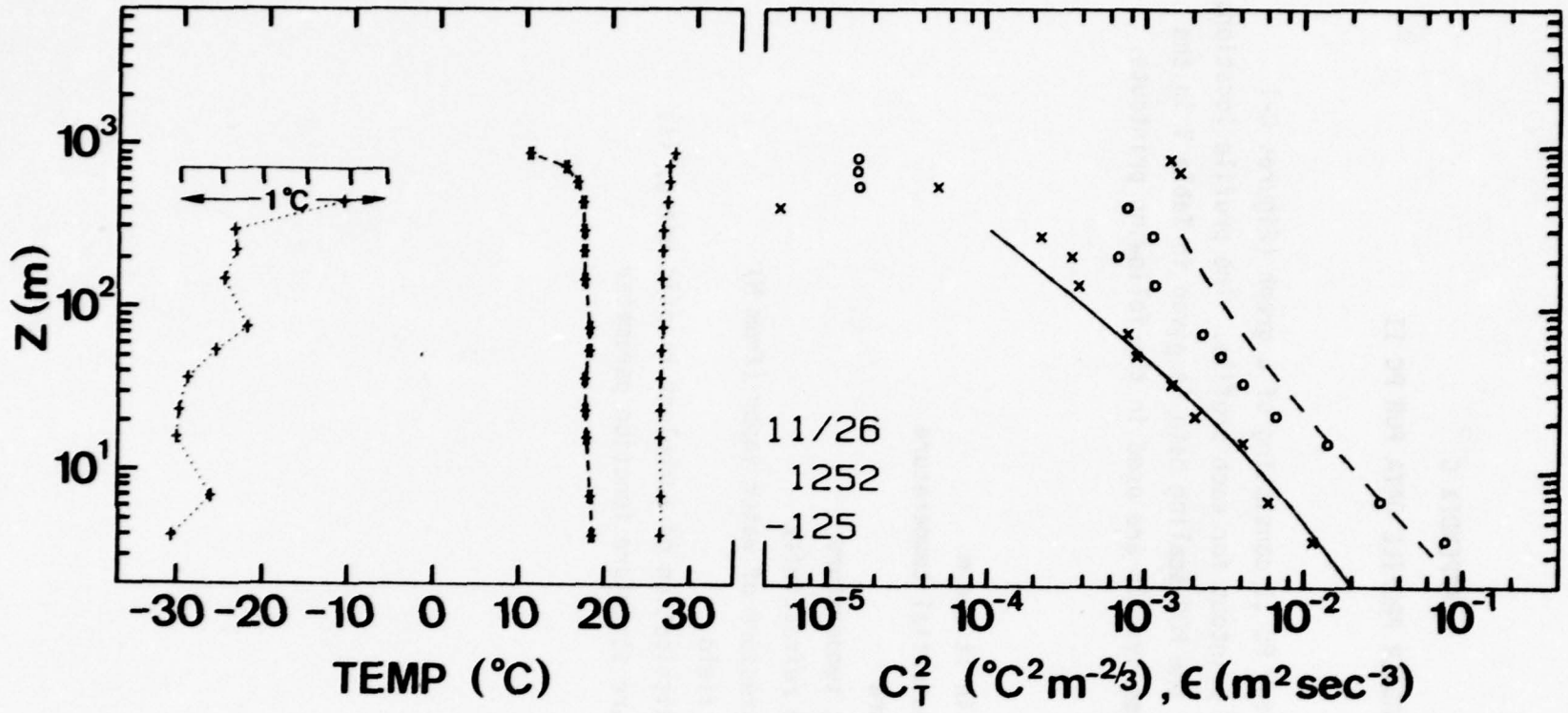
Time h/m/s	Alt ft	T Cent	Ts Cent	N	e mb	E V/m	Eps m^2/s^3	CT2 C^2/m^2/3	P mb
18 10 32	7485	11.11	19.75	221.2	1.93	6.3	8.50E-05	0.00E 00	777.7
18 11 4	7462	11.21	19.75	220.8	1.84	6.1	8.18E-05	0.00E 00	778.3
18 11 36	7470	11.16	19.69	220.6	1.78	7.6	2.39E-05	0.00E 00	778.1
18 12 8	7430	11.32	19.66	220.5	1.72	7.3	5.16E-06	0.00E 00	779.3
18 12 40	7405	11.32	19.52	220.5	1.68	6.5	7.72E-06	0.00E 00	780.0
18 13 12	7422	11.28	19.43	220.4	1.68	5.7	1.32E-05	0.00E 00	779.5
18 13 43	7575	11.34	19.29	219.7	1.82	2.1	2.30E-05	0.00E 00	775.0
18 14 15	7961	10.67	19.07	218.2	2.05	-0.6	2.01E-05	0.00E 00	763.7
18 14 47	8379	9.75	16.76	215.6	2.03	-0.1	5.89E 00	0.00E 00	751.6
18 15 19	8684	8.53	10.76	175.3	-6.25	0.2	3.88E 01	0.00E 00	742.8
18 15 51	9071	9.00	18.05	203.6	0.49	2.3	6.08E 00	0.00E 00	731.9
18 16 23	9459	8.01	18.65	209.8	2.30	4.6	1.09E-05	0.00E 00	721.0
18 16 55	9785	7.22	18.83	208.4	2.39	4.9	1.48E-05	0.00E 00	712.0
18 17 27	9939	6.89	18.94	207.6	2.39	5.1	2.43E-05	0.00E 00	707.8
18 17 59	9951	6.59	19.08	207.4	2.34	4.6	1.46E-05	0.00E 00	707.5
18 18 31	9937	6.59	19.22	207.0	2.25	4.4	5.33E-06	0.00E 00	707.8

APPENDIX C

LADDER PROFILE DATA FOR PC II

Ladder profile data for PC II consisting of a graph (Figures C-1 through C-21) and tabular printout for each profile. The profile locations are given in Figure 1 and the MOS scaling data is given in Table V in the body of this report. These symbols are used in the following printouts.

Time,	hhmmss
Alt,	altitude in ft and m
VT,	virtual potential temperature
T,	temperature
Td,	dew point temperature
N,	microwave refractivity
e,	partial pressure of water vapor (from N)
E,	electric field
Eps,	rate of dissipation of turbulent kinetic energy (ε)
C_T^2	temperature structure function parameter
P,	pressure

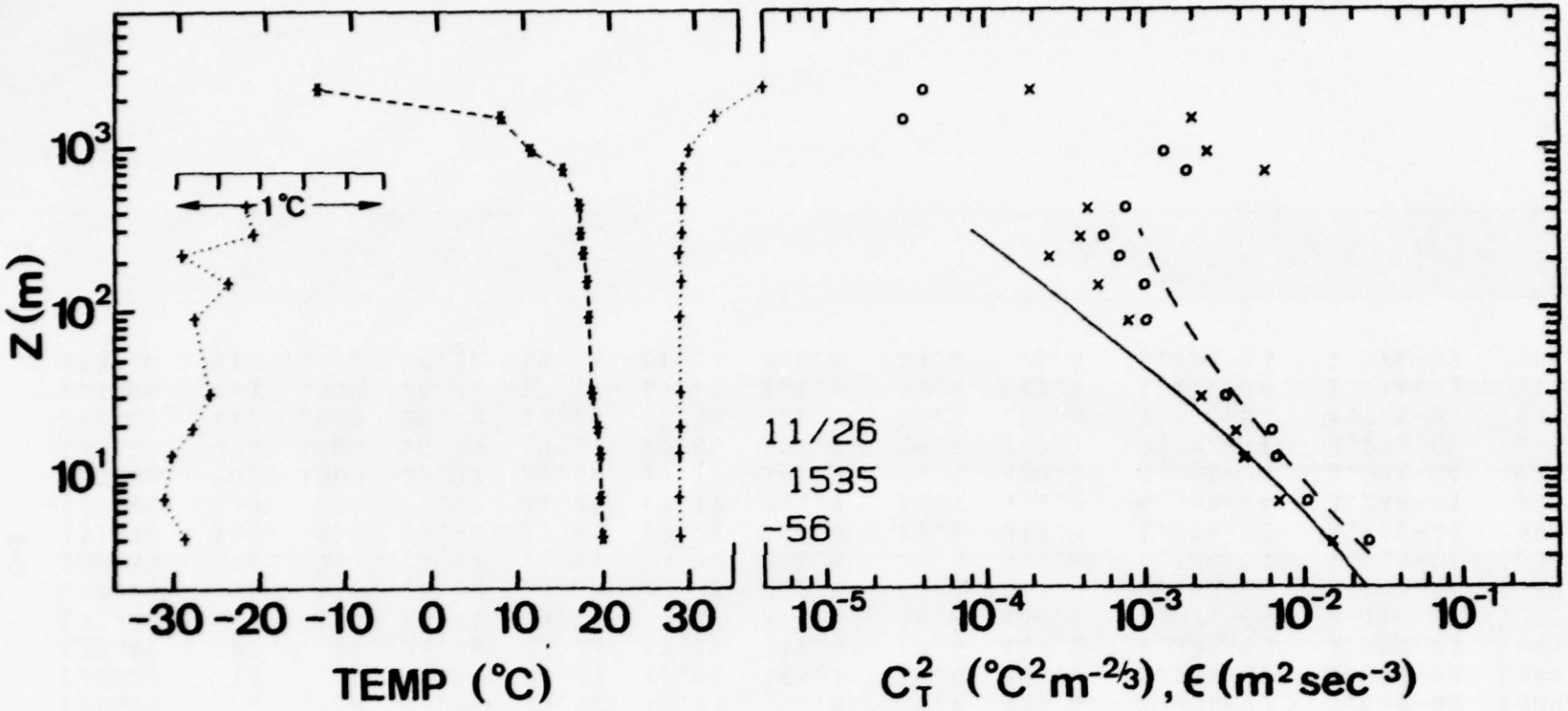


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-1. Ladder Profile #1

Profile# 1 11/26

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	H	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
125245	3	10	25.66	23.29	18.01	351.7	20.6	369.1	7.37E-02	1.08E-02	1010.7
125600	6	20	25.86	23.46	17.93	350.8	20.4	424.8	2.86E-02	5.66E-03	1009.9
125820	15	50	25.69	23.27	17.46	348.3	19.8	384.0	1.34E-02	3.94E-03	1009.0
130045	23	75	25.70	23.23	17.30	347.3	19.6	429.5	6.32E-03	1.96E-03	1008.2
130335	37	120	25.74	23.14	17.27	346.5	19.6	400.1	3.93E-03	1.41E-03	1005.2
130715	55	180	25.88	23.02	17.78	349.1	20.3	412.0	2.86E-03	8.44E-04	1004.1
130955	76	250	26.03	22.94	17.82	348.9	20.3	398.1	2.18E-03	7.42E-04	1002.0
131240	153	500	25.92	22.15	17.26	344.8	19.6	345.7	1.08E-03	3.63E-04	993.3
131540	229	750	25.97	21.45	17.17	342.8	19.5	336.0	6.36E-04	3.28E-04	983.7
131825	305	1000	25.97	20.68	17.16	341.5	19.5	320.2	1.05E-03	2.09E-04	974.9
132120	458	1500	26.49	19.68	17.06	337.8	19.3	273.3	7.28E-04	4.77E-06	957.4
132400	610	2000	26.70	18.47	16.38	331.3	18.5	226.6	1.50E-05	4.72E-05	939.6
132600	763	2500	26.71	17.11	15.15	321.6	17.1	173.5	1.47E-05	1.57E-03	919.5
132900	915	3000	27.32	16.69	11.13	300.8	13.2	96.0	1.48E-05	1.37E-03	905.3

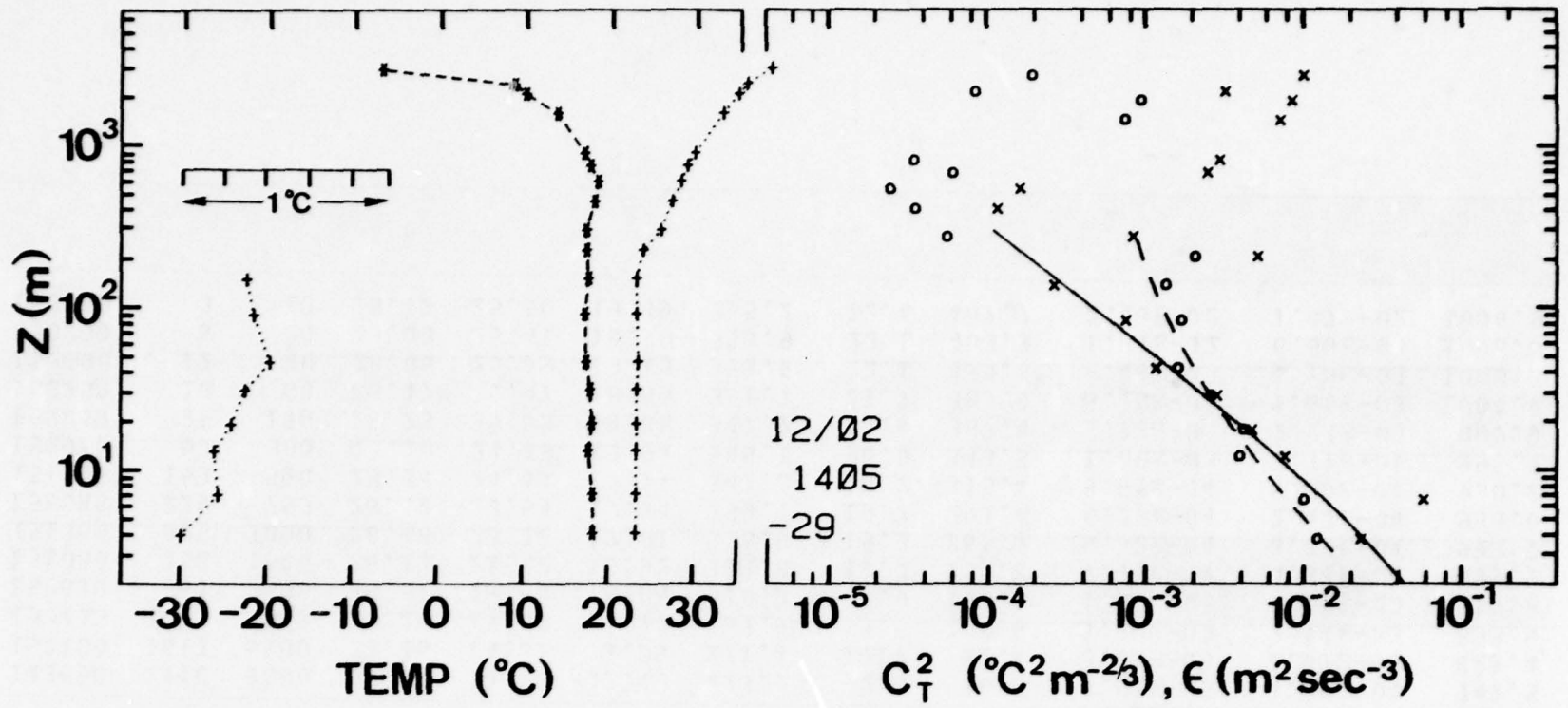


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ (o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-2. Ladder Profile #2

Profile# 2 11/26

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
143650	2440	8000	37.56	13.22	-12.40	213.2	2.3	16.3	4.02E-05	1.90E-04	747.5
150100	1617	5300	32.15	14.81	8.09	271.4	10.7	61.4	3.02E-05	1.97E-03	828.4
150415	1007	3300	29.26	17.67	11.47	297.9	13.5	108.6	1.30E-03	2.44E-03	893.9
150630	763	2500	28.51	18.90	15.06	318.3	17.0	168.3	1.80E-03	5.60E-03	917.8
151000	458	1500	28.42	21.62	16.92	333.8	19.2	237.8	7.45E-04	4.34E-04	955.5
151300	305	1000	28.46	23.18	17.01	336.9	19.3	265.7	5.42E-04	3.89E-04	973.7
151545	229	750	28.12	23.54	17.34	339.7	19.7	291.6	6.78E-04	2.47E-04	980.0
151745	153	500	28.34	24.48	17.74	343.2	20.2	315.4	9.65E-04	5.00E-04	990.2
152050	92	300	28.18	24.89	17.94	345.1	20.5	349.5	1.00E-03	7.77E-04	995.7
152450	31	100	28.25	25.53	18.25	347.7	20.9	387.4	3.13E-03	2.21E-03	1002.9
152750	18	60	28.17	25.47	18.88	351.7	21.7	383.9	6.10E-03	3.65E-03	1004.4
153000	12	40	28.06	25.39	19.15	353.6	22.1	359.5	6.48E-03	4.10E-03	1005.2
153230	6	20	28.03	25.41	19.18	353.9	22.1	403.3	1.01E-02	6.80E-03	1006.0
153500	3	10	28.12	25.50	19.39	355.2	22.4	407.7	2.48E-02	1.47E-02	1006.9

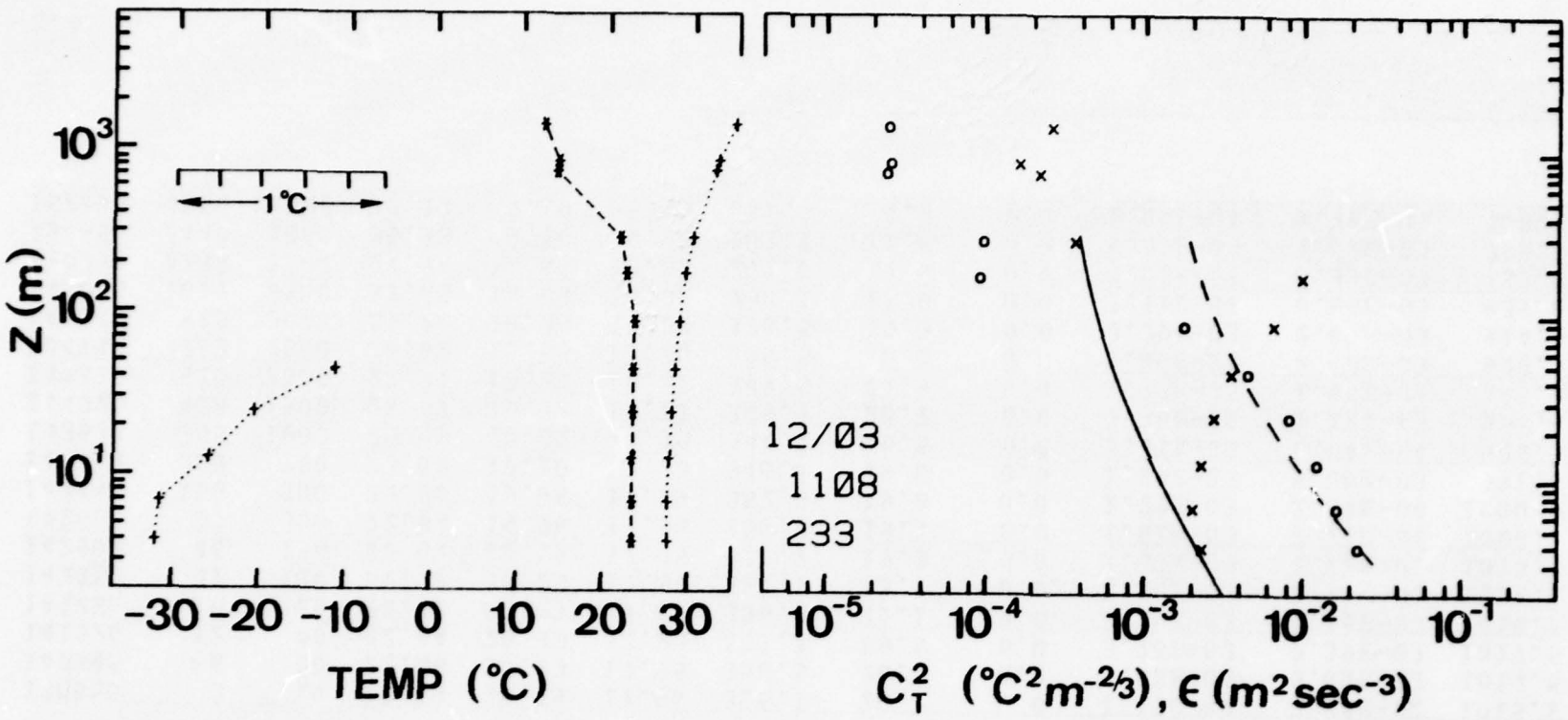


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-3. Ladder Profile #3

Profile# 3 12/02

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
140550	3	10	22.48	20.19	17.66	356.4	20.1	0.0	1.17E-02	2.24E-02	1018.1
140845	6	20	22.66	20.33	17.75	356.5	20.2	0.0	9.68E-03	5.63E-02	1017.5
141520	12	40	22.64	20.33	17.23	353.7	19.6	0.0	3.78E-03	7.39E-03	1017.5
141750	18	60	22.73	20.28	17.69	356.0	20.1	0.0	3.99E-03	4.56E-03	1016.5
142050	31	100	22.79	20.25	17.54	354.7	19.9	0.0	2.50E-03	2.75E-03	1014.4
142500	46	150	22.91	20.29	17.03	351.7	19.3	0.0	1.53E-03	1.12E-03	1013.8
142805	92	300	22.84	19.76	17.00	350.8	19.3	0.0	1.61E-03	7.21E-04	1008.2
143045	153	500	22.80	19.06	17.39	352.0	19.8	0.0	1.29E-03	2.54E-04	1000.9
143340	229	750	23.60	19.10	17.23	348.6	19.6	0.0	1.99E-03	5.00E-03	991.4
143630	305	1000	25.59	20.32	17.19	344.2	19.5	0.0	5.31E-05	8.04E-04	982.3
144025	458	1500	26.87	19.92	18.13	345.7	20.7	0.0	3.36E-05	1.12E-04	966.4
144325	610	2000	27.91	19.35	18.57	343.5	21.3	0.0	2.33E-05	1.55E-04	945.3
144745	763	2500	28.62	18.65	17.70	335.5	20.2	0.0	5.80E-05	2.40E-03	929.9
145040	915	3000	29.46	18.06	17.02	328.5	19.3	0.0	3.29E-05	2.87E-03	914.3
145815	1617	5300	32.65	14.63	14.02	298.1	15.9	0.0	7.11E-04	6.96E-03	839.6
150345	2135	7000	34.44	11.66	10.52	271.6	12.6	0.0	9.03E-04	8.30E-03	783.5
150650	2440	8000	35.38	9.70	9.22	261.1	11.6	0.0	8.03E-05	3.12E-03	755.1
151130	3050	10000	38.11	7.50	-5.59	212.6	4.0	0.0	1.84E-04	9.78E-03	700.4

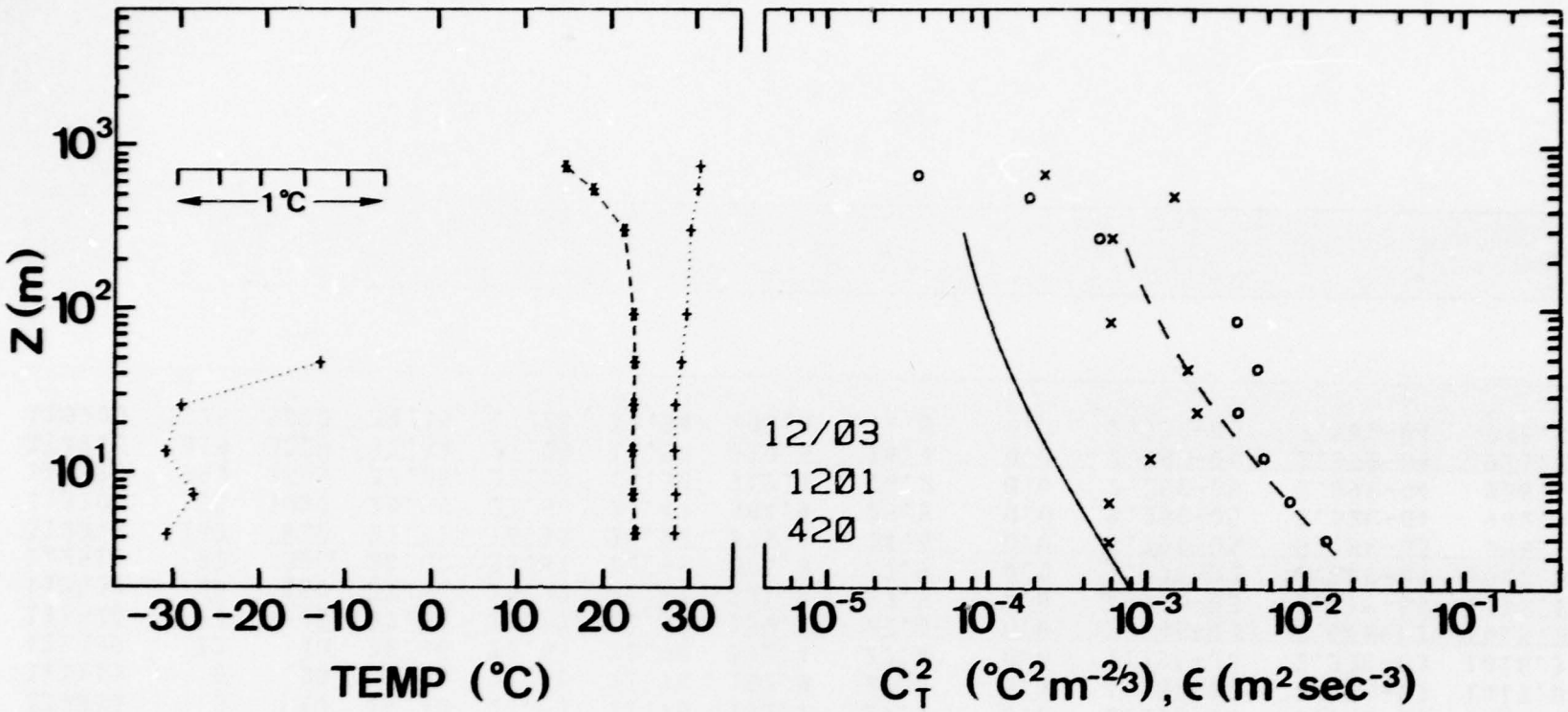


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-4. Ladder Profile #4

Profile# 4 12/03

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
110830	3	10	26.70	23.53	22.75	382.7	27.5	0.0	2.15E-02	2.23E-03	1017.5
111115	6	20	26.73	23.51	22.78	382.9	27.6	0.0	1.58E-02	1.96E-03	1017.0
111530	12	40	26.96	23.68	22.78	382.4	27.6	0.0	1.19E-02	2.23E-03	1016.3
111820	24	80	27.18	23.77	22.80	382.1	27.6	0.0	7.84E-03	2.64E-03	1015.2
112030	46	150	27.56	23.92	22.87	381.9	27.7	0.0	4.31E-03	3.41E-03	1013.4
112510	92	300	28.00	23.87	22.99	381.3	27.9	0.0	1.70E-03	6.28E-03	1007.5
112820	183	600	21.51	16.90	20.92	375.6	24.6	0.0	8.79E-05	9.49E-03	996.1
113100	305	1000	29.59	23.58	21.47	364.9	25.5	0.0	9.29E-05	3.52E-04	982.9
114320	793	2600	32.01	22.20	14.32	312.7	16.2	0.0	2.26E-05	2.09E-04	926.4
114715	915	3000	32.34	21.28	14.50	310.9	16.4	0.0	2.39E-05	1.55E-04	911.7
115200	1525	5000	34.25	17.28	12.94	292.3	14.8	0.0	2.33E-05	2.50E-04	848.5

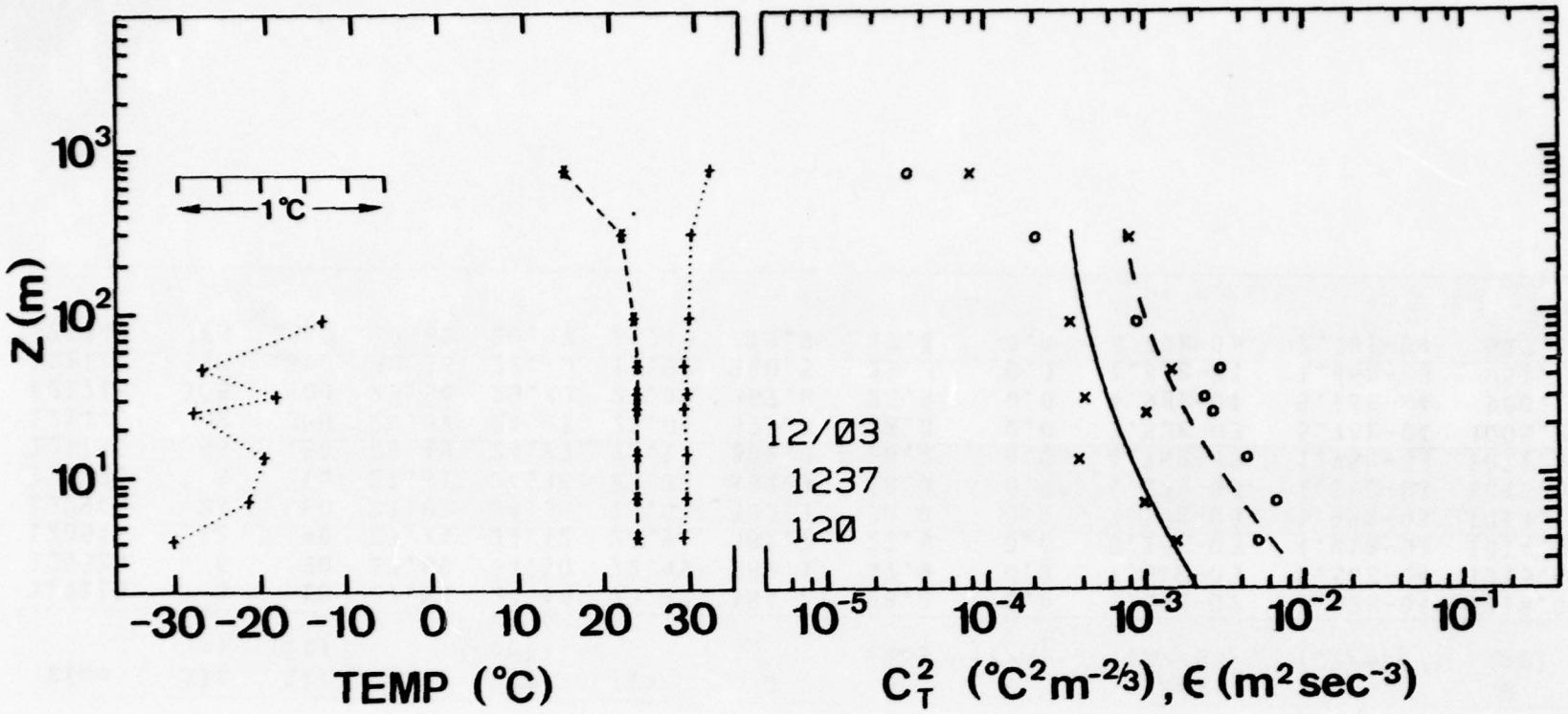


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-5. Ladder Profile #5

Profile# 5 12/03

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
120115	3	10	27.74	24.46	23.22	384.2	28.3	0.0	1.27E-02	5.52E-04	1016.0
120325	6	20	27.88	24.60	22.99	382.1	27.9	0.0	7.51E-03	5.56E-04	1015.4
120545	12	40	27.74	24.42	22.91	381.7	27.8	0.0	5.18E-03	1.01E-03	1014.8
120800	24	80	27.82	24.35	23.03	382.3	28.0	0.0	3.59E-03	1.99E-03	1013.5
121025	3	10	27.61	24.36	23.02	382.9	28.0	0.0	6.23E-03	1.15E-03	1016.0
121155	46	150	28.49	24.77	23.17	382.0	28.2	0.0	4.76E-03	1.75E-03	1011.3
121440	92	300	29.07	24.91	23.04	379.3	28.0	0.0	3.52E-03	5.76E-04	1005.2
121745	305	1000	29.54	23.43	21.98	367.8	26.3	0.0	4.98E-04	5.98E-04	980.1
122120	549	1800	30.36	22.40	18.52	340.5	21.2	0.0	1.83E-04	1.46E-03	952.2
122440	763	2500	30.62	20.97	15.40	319.7	17.4	0.0	3.70E-05	2.28E-04	927.4

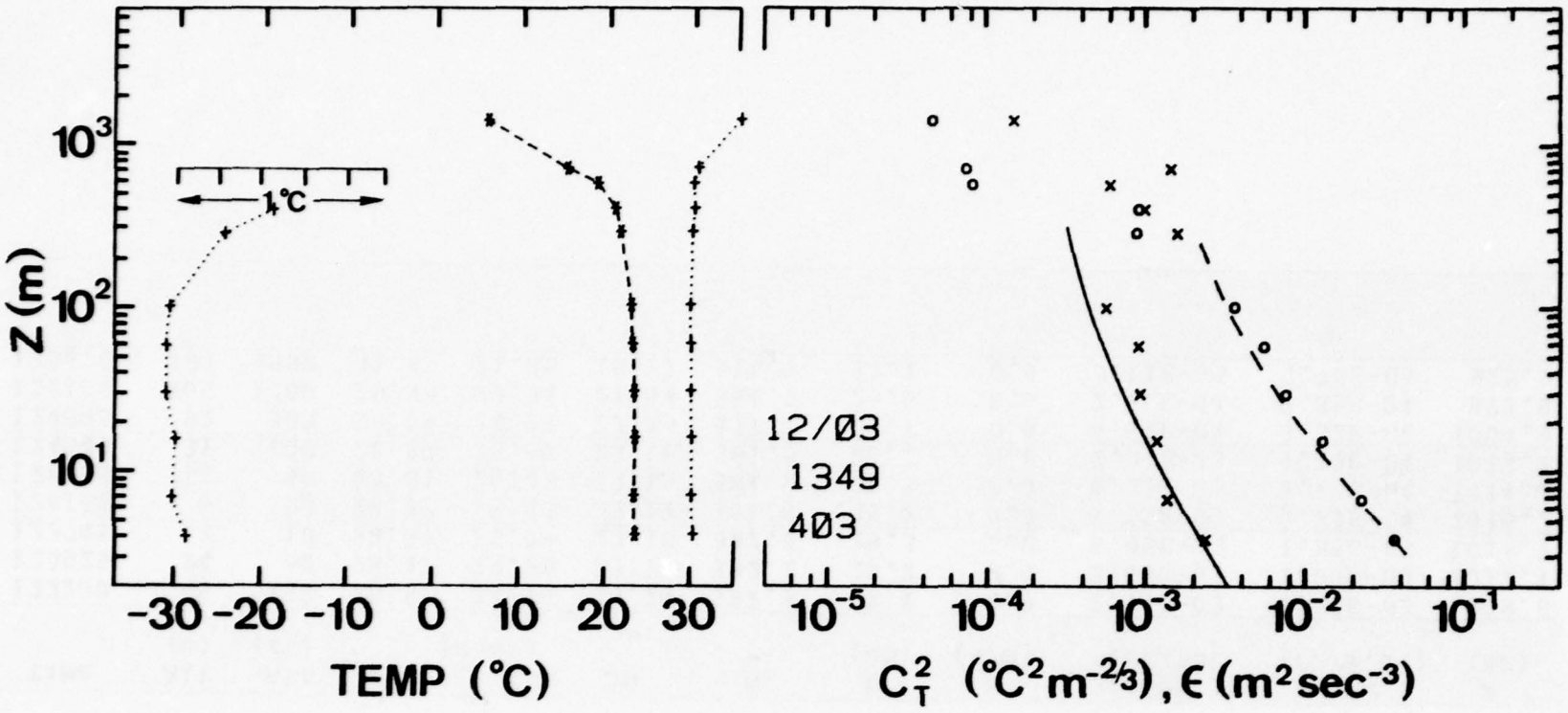


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-6. Ladder Profile #6

Profile# 6 12/03

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
123200	46	150	28.51	24.78	23.26	382.3	28.4	0.0	2.94E-03	1.45E-03	1009.8
123525	24	80	28.47	24.98	23.14	382.1	28.2	0.0	2.63E-03	1.00E-03	1013.4
123745	3	10	28.37	25.09	23.18	382.8	28.3	0.0	5.05E-03	1.55E-03	1015.7
124100	6	20	28.73	25.43	23.12	381.6	28.2	0.0	6.62E-03	9.73E-04	1015.2
124315	12	40	28.81	25.43	23.19	381.9	28.3	0.0	4.33E-03	3.77E-04	1014.2
124540	31	100	28.87	25.30	23.18	381.5	28.3	0.0	2.34E-03	4.13E-04	1012.2
124800	92	300	29.09	24.97	22.84	377.7	27.7	0.0	8.64E-04	3.32E-04	1004.9
125125	305	1000	29.38	23.34	21.54	364.7	25.6	0.0	2.00E-04	7.89E-04	978.9
125620	763	2500	31.47	21.85	15.12	316.7	17.1	0.0	3.11E-05	7.76E-05	925.9

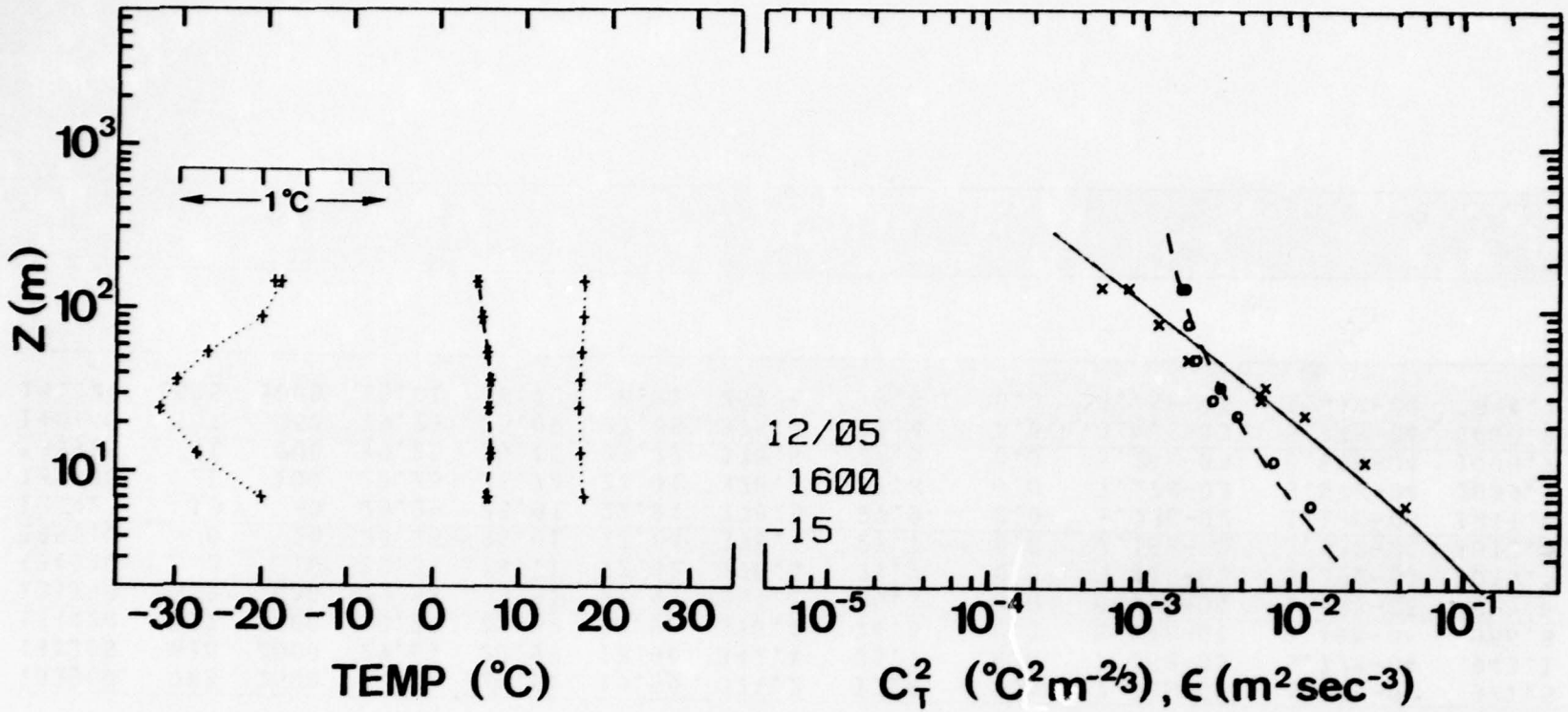


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-7. Ladder Profile #7

Profile# 7 12/03

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
133900	763	2500	30.18	20.51	15.59	321.2	17.6	0.0	7.06E-05	1.37E-03	927.5
134225	610	2000	29.64	20.99	18.90	342.4	21.7	0.0	7.76E-05	5.72E-04	943.1
134420	427	1400	29.77	22.62	20.90	358.4	24.6	0.0	8.64E-04	9.49E-04	966.8
134700	305	1000	29.53	23.51	21.49	364.3	25.5	0.0	8.39E-04	1.52E-03	979.6
134940	3	10	29.34	26.11	22.82	378.0	27.7	0.0	3.48E-02	2.29E-03	1013.5
135210	6	20	29.28	26.01	22.84	378.1	27.7	0.0	2.18E-02	1.33E-03	1012.9
135425	15	50	29.29	25.91	22.94	378.6	27.9	0.0	1.23E-02	1.13E-03	1011.6
135700	31	100	29.25	25.72	22.91	378.2	27.8	0.0	7.27E-03	8.87E-04	1009.7
135915	61	200	29.25	25.45	22.72	376.6	27.5	0.0	5.28E-03	8.60E-04	1006.7
140145	107	350	29.27	25.02	22.65	375.2	27.4	0.0	3.48E-03	5.44E-04	1000.8
141320	1525	5000	35.01	18.70	6.81	267.6	9.8	0.0	4.38E-05	1.43E-04	844.7

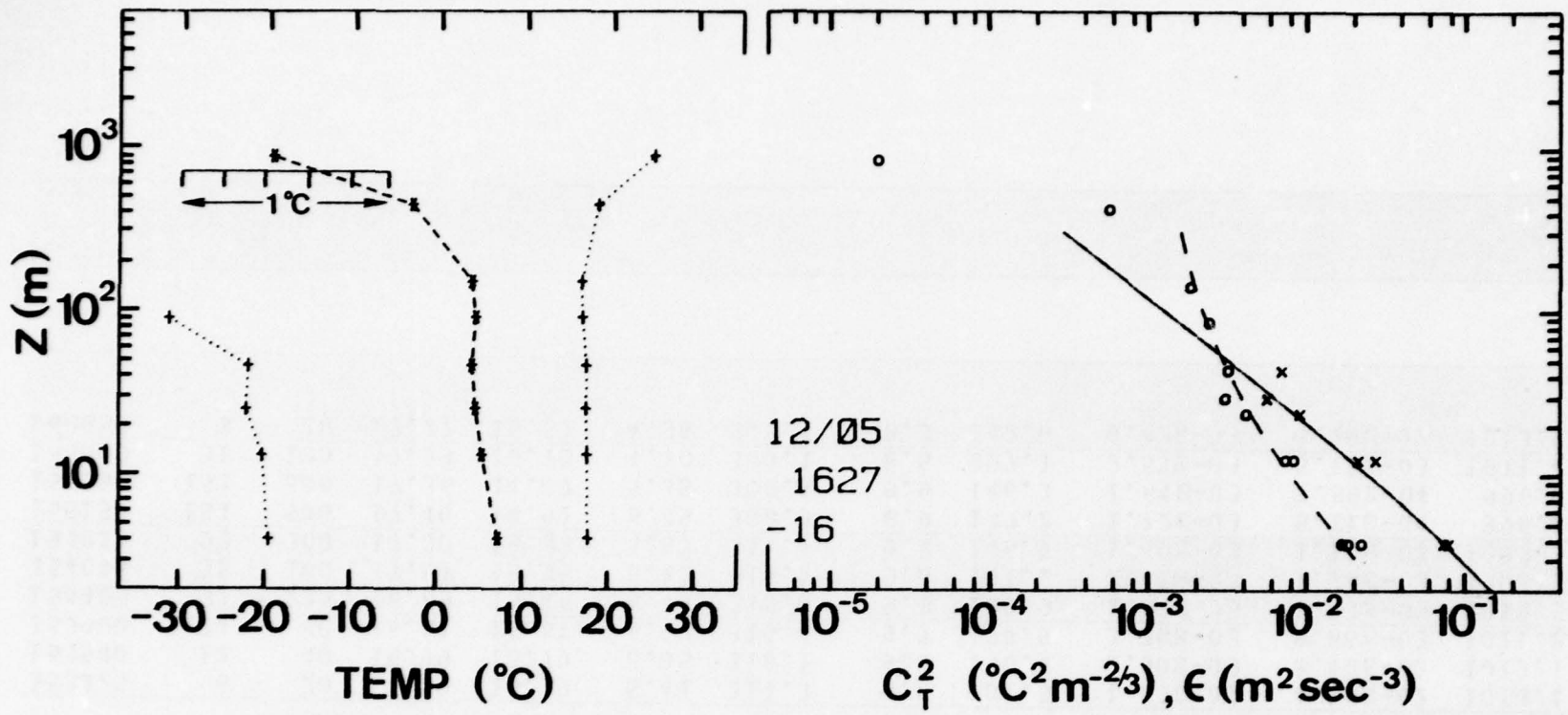


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-8. Ladder Profile #8

Profile# 8 12/05

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
153225	6	20	17.30	16.19	6.41	314.3	9.6	201.5	1.07E-02	4.29E-02	1013.4
153540	12	40	16.99	15.79	6.85	316.1	9.9	190.5	6.30E-03	2.40E-02	1013.1
153900	24	80	16.81	15.51	6.62	315.4	9.7	177.9	3.70E-03	9.86E-03	1011.8
154400	37	120	16.89	15.46	6.78	315.6	9.8	180.9	2.87E-03	5.53E-03	1010.5
154645	55	180	17.04	15.45	6.43	314.0	9.6	171.2	2.01E-03	1.79E-03	1008.3
154915	92	300	17.30	15.38	5.87	311.1	9.2	146.9	1.80E-03	1.17E-03	1003.5
155150	153	500	17.40	14.91	5.35	308.3	8.9	137.2	1.72E-03	5.11E-04	996.3
155350	153	500	17.36	14.87	5.35	308.4	8.9	146.3	1.64E-03	7.59E-04	996.6
155800	31	100	17.39	16.15	4.70	309.1	8.5	227.1	2.57E-03	5.19E-03	1011.4
160055	3	10	17.47	16.52	4.36	308.4	8.3	242.0	6.83E-03	3.28E-02	1013.9

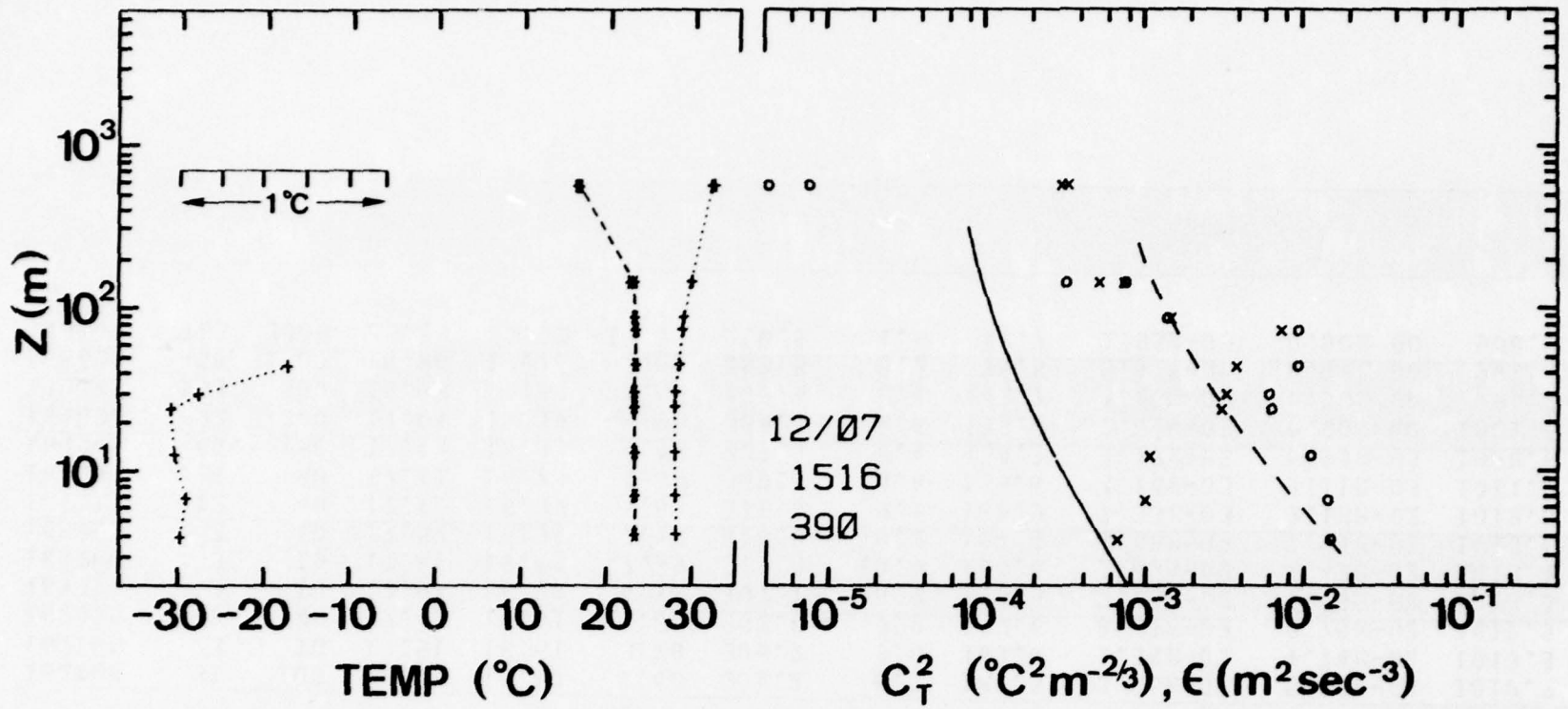


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-9. Ladder Profile #9

Profile# 9 12/05

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m,67)	P (mb)
162400	31	100	16.94	15.90	1.40	301.2	6.7	187.5	3.05E-03	5.62E-03	1010.7
162700	3	10	17.51	16.61	3.78	306.7	8.0	163.6	1.34E-02	4.74E-02	1013.3
162925	12	40	17.49	16.61	1.88	302.0	7.0	152.6	8.31E-03	2.75E-02	1012.5
163315	3	10	17.92	16.99	4.13	307.1	8.2	140.0	2.23E-02	7.98E-02	1013.3
163700	3	10	17.61	16.45	7.39	317.0	10.2	154.8	1.83E-02	7.42E-02	1013.4
163850	3	10	17.52	16.36	7.32	316.9	10.2	164.4	1.68E-02	7.98E-02	1013.5
164115	12	40	17.49	16.37	5.63	311.6	9.1	168.9	7.33E-03	2.13E-02	1012.6
164330	24	80	17.41	16.23	4.89	309.4	8.6	159.8	4.14E-03	9.11E-03	1011.2
164545	46	150	17.42	16.05	4.47	307.9	8.4	154.7	3.17E-03	6.93E-03	1008.8
164830	92	300	17.04	15.19	4.96	308.3	8.6	139.0	2.41E-03	0.00E 00	1001.6
165045	153	500	16.93	14.50	4.53	306.5	8.4	141.7	1.83E-03	0.00E 00	996.2
165600	458	1500	18.86	13.76	-2.09	283.8	5.2	75.5	5.61E-04	0.00E 00	962.1
170140	915	3000	25.10	15.92	-17.72	250.5	1.5	47.7	1.93E-05	0.00E 00	908.3

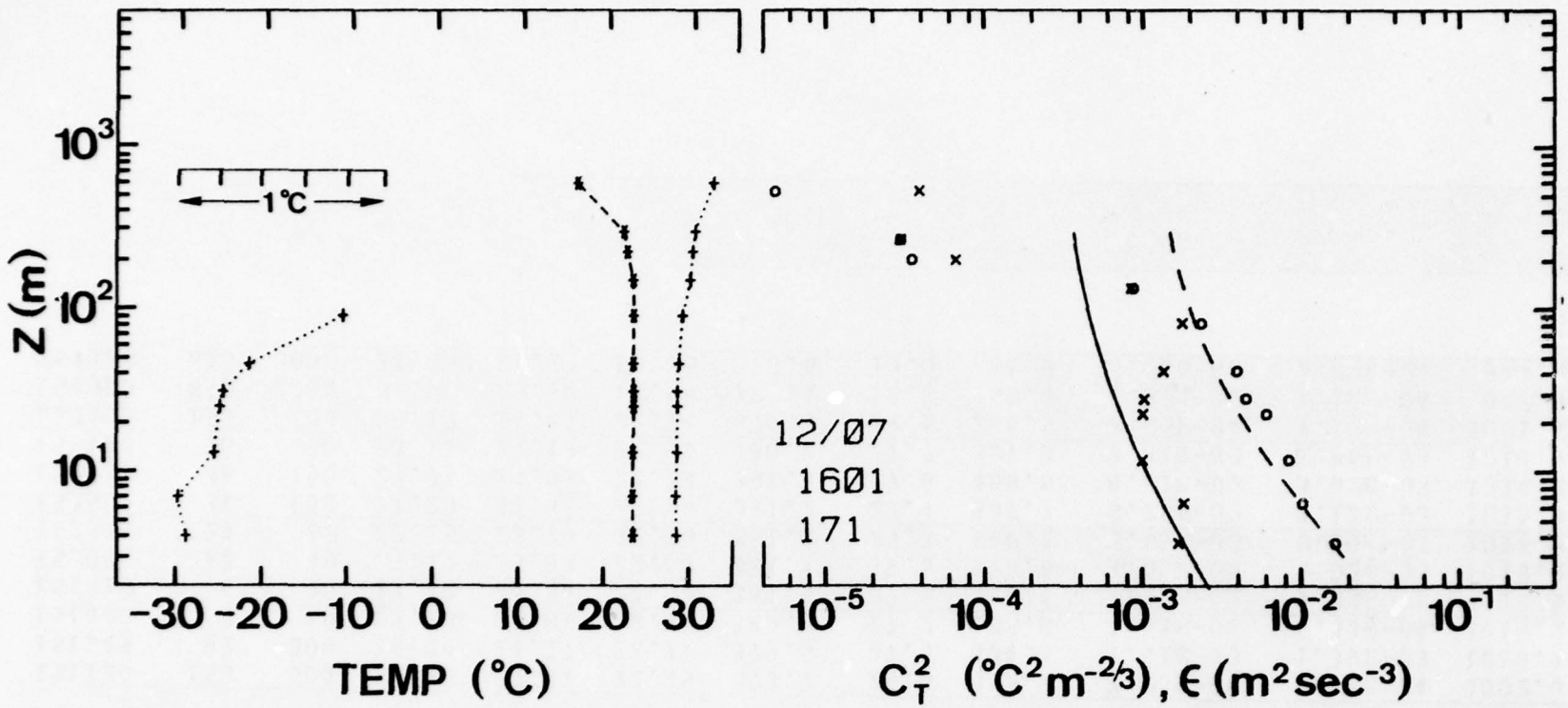


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-10. Ladder Profile #10

Profile# 10 12/07

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
151120	153	500	29.23	24.61	22.29	373.7	26.8	352.7	7.20E-04	4.95E-04	1002.0
151345	92	300	28.24	24.17	22.71	379.5	27.5	404.4	1.31E-03	1.39E-03	1010.3
151600	3	10	27.19	24.05	22.54	380.8	27.2	605.6	1.41E-02	6.33E-04	1019.2
151810	6	20	27.22	24.04	22.63	381.5	27.3	590.4	1.35E-02	9.54E-04	1018.9
152050	12	40	27.17	23.93	22.62	381.4	27.3	578.6	1.06E-02	1.02E-03	1018.4
152305	24	80	27.15	23.79	22.60	381.1	27.3	560.1	5.95E-03	2.90E-03	1016.8
152550	31	100	27.29	23.85	22.66	381.2	27.4	507.7	5.78E-03	3.12E-03	1015.9
152815	46	150	27.71	24.09	22.79	381.3	27.6	458.6	8.81E-03	3.62E-03	1014.3
153110	76	250	28.11	24.16	22.85	380.7	27.7	381.8	8.81E-03	6.96E-03	1010.9
153405	153	500	29.17	24.47	22.74	376.9	27.5	286.5	3.03E-04	7.10E-04	1001.4
154000	610	2000	31.90	23.62	16.54	327.1	18.7	51.8	3.63E-06	3.16E-04	947.8
154320	610	2000	31.54	23.23	16.76	328.6	19.0	51.3	7.26E-06	2.87E-04	947.4

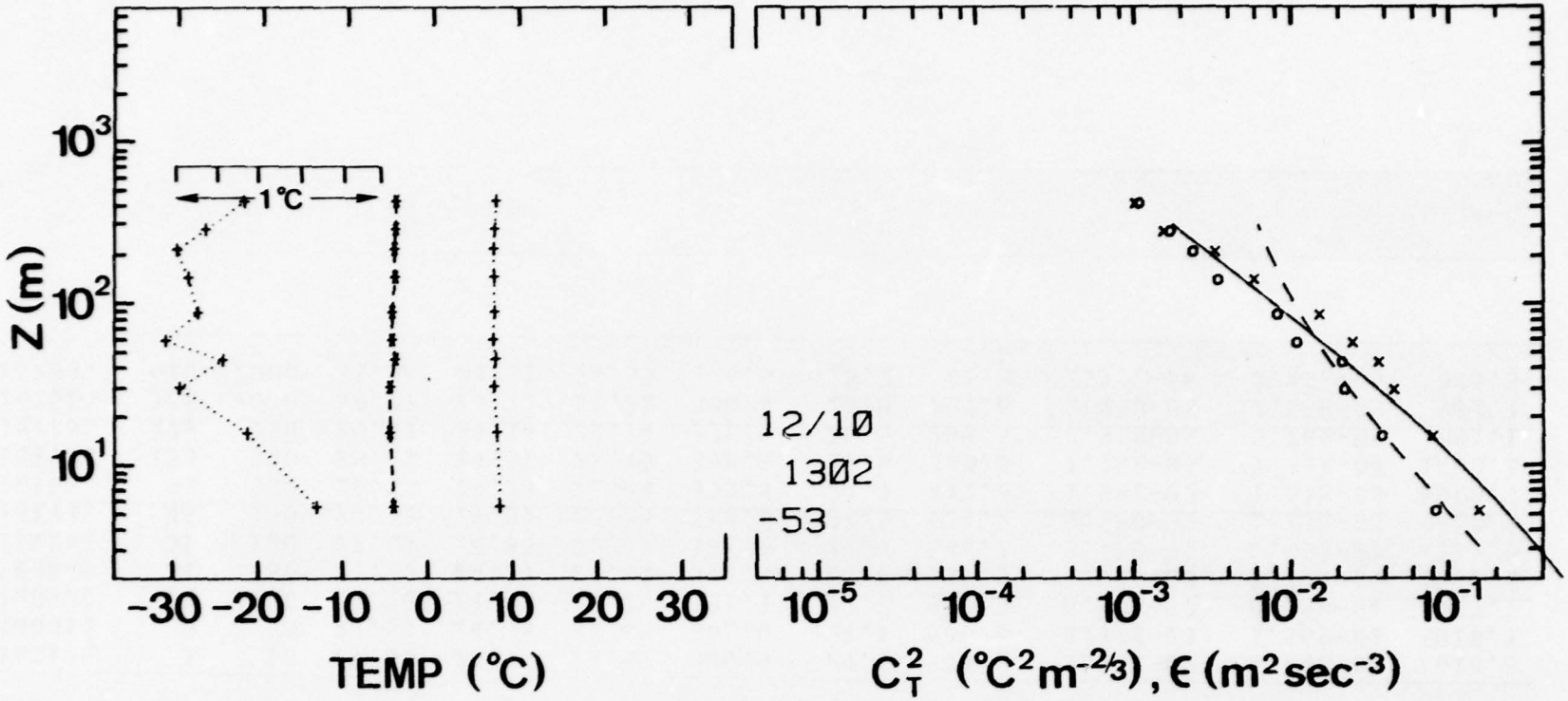


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-11. Ladder Profile #11

Profile# 11 12/07

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m,67)	P (mb)
160105	3	10	27.62	24.45	22.67	380.9	27.4	574.9	1.33E-02	1.44E-03	1018.5
160315	6	20	27.58	24.38	22.68	381.0	27.4	585.3	8.32E-03	1.56E-03	1018.1
160600	12	40	27.76	24.48	22.76	381.3	27.6	529.1	6.88E-03	8.65E-04	1017.7
160845	24	80	27.79	24.37	22.81	381.4	27.6	549.9	4.97E-03	8.70E-04	1016.1
161145	31	100	27.80	24.33	22.82	381.4	27.7	546.1	3.71E-03	8.89E-04	1015.5
161435	46	150	27.93	24.31	22.75	380.5	27.5	534.2	3.25E-03	1.18E-03	1013.9
161650	92	300	28.38	24.28	22.84	379.8	27.7	412.0	1.94E-03	1.55E-03	1008.7
161910	153	500	29.22	24.51	22.76	376.8	27.6	339.0	7.19E-04	7.34E-04	1000.5
162135	229	750	29.53	24.16	22.14	370.6	26.5	285.5	2.91E-05	5.76E-05	991.1
162515	305	1000	29.77	23.72	21.71	366.4	25.8	237.6	2.45E-05	2.58E-05	983.4
162835	610	2000	31.90	23.61	16.55	326.5	18.7	61.3	3.80E-06	3.40E-05	945.5

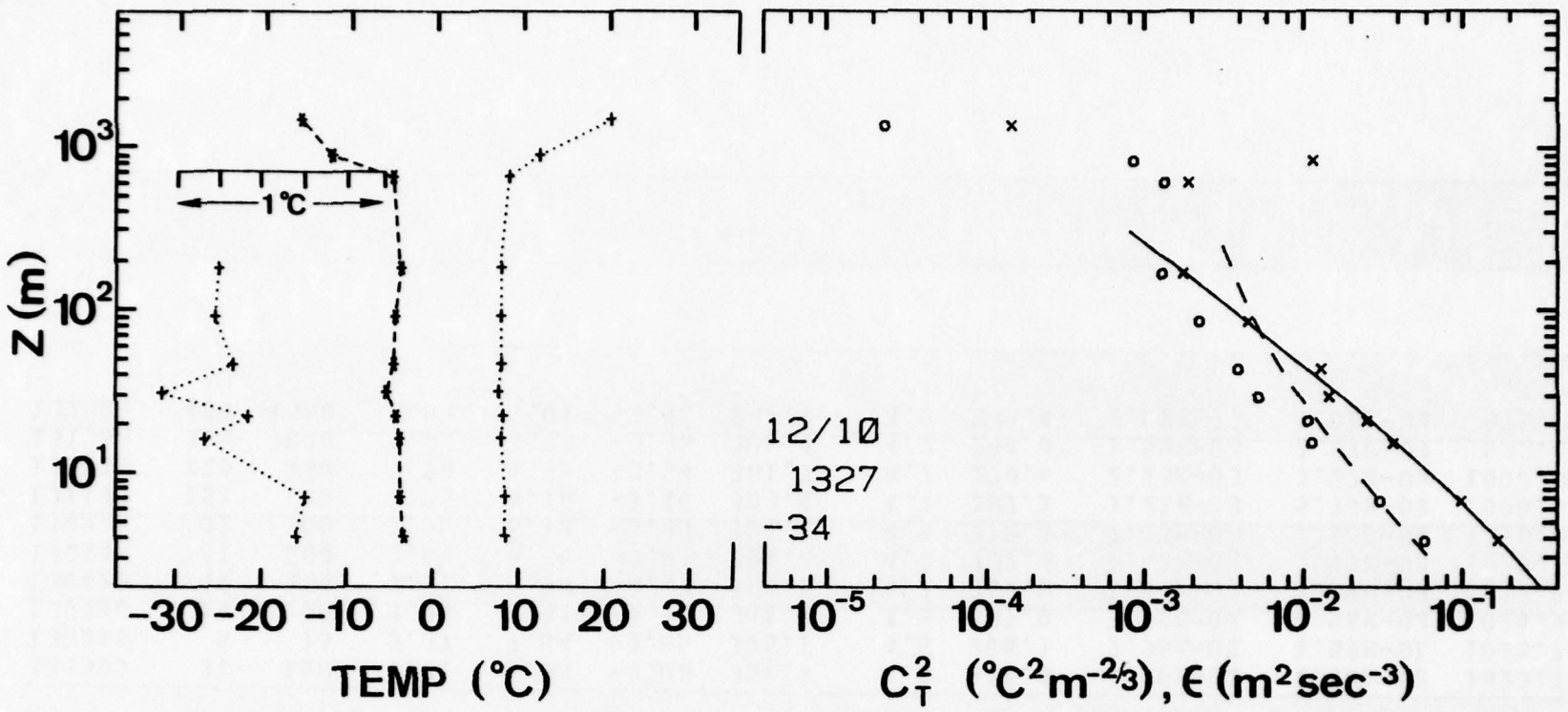


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-12. Ladder Profile #12

Profile# 12 12/10

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
125900	31	100	7.71	6.94	-4.08	304.9	4.5	316.3	2.06E-02	4.48E-02	1023.7
130215	5	15	8.37	7.84	-3.65	305.1	4.6	266.1	7.98E-02	1.59E-01	1025.7
130300	15	50	8.03	7.41	-4.09	304.7	4.5	327.0	3.58E-02	7.96E-02	1024.9
130420	46	150	7.92	6.97	-3.43	305.5	4.7	328.8	1.98E-02	3.57E-02	1022.2
130635	61	200	7.64	6.56	-3.81	304.8	4.6	322.2	1.02E-02	2.45E-02	1020.2
130855	92	300	7.80	6.42	-3.80	304.1	4.6	312.3	7.65E-03	1.50E-02	1016.8
131130	153	500	7.75	5.76	-3.46	303.4	4.7	297.3	3.22E-03	5.75E-03	1009.8
131415	229	750	7.70	4.95	-3.54	301.7	4.7	270.6	2.23E-03	3.23E-03	1000.8
131700	305	1000	7.84	4.33	-3.36	300.4	4.7	264.8	1.59E-03	1.53E-03	992.4
132000	458	1500	8.03	3.01	-3.30	297.4	4.8	230.4	1.02E-03	1.01E-03	975.7

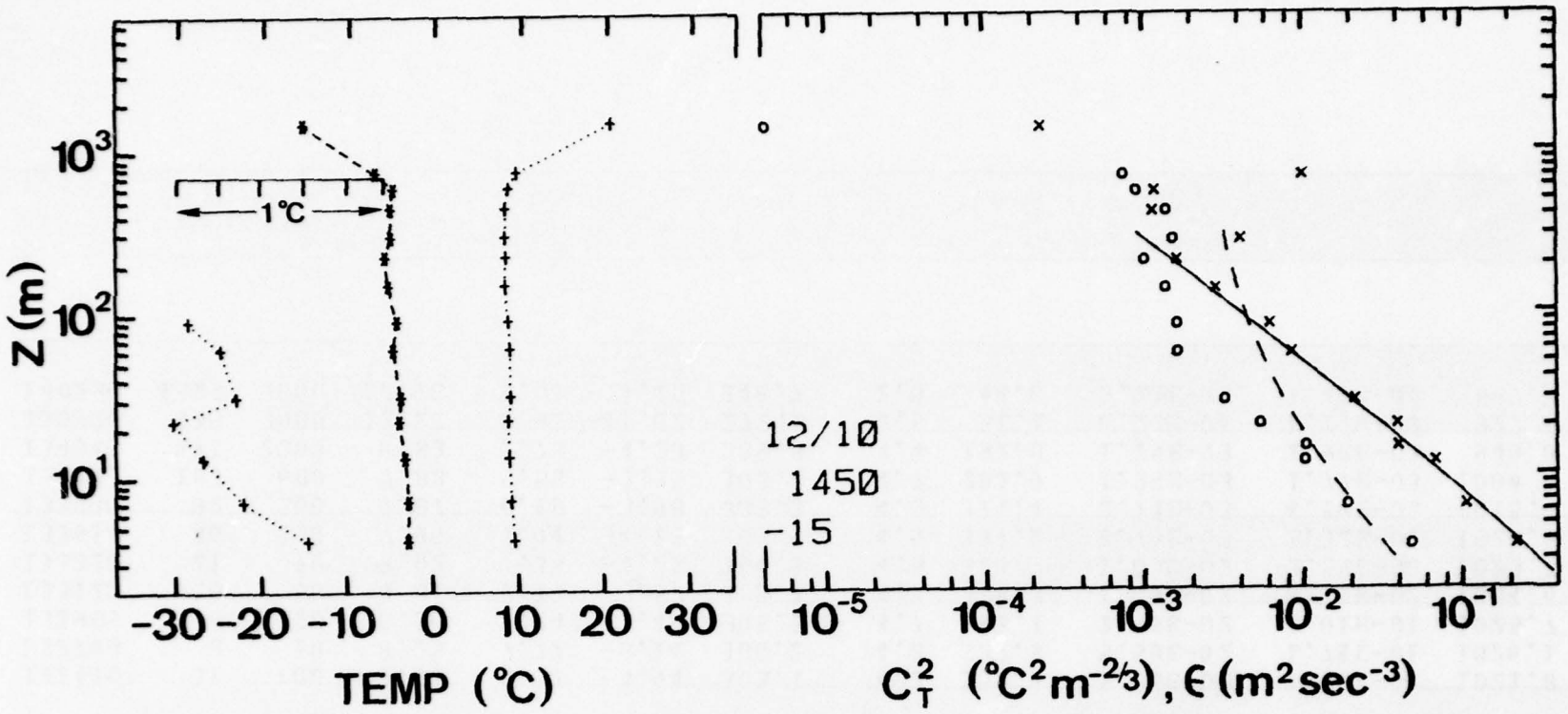


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-13. Ladder Profile #13

Profile# 13 12/10

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
132410	31	100	7.61	6.87	-4.94	303.1	4.2	352.1	5.05E-03	1.47E-02	1021.8
132700	3	10	8.25	7.72	-3.14	306.2	4.8	322.5	5.59E-02	1.71E-01	1026.1
132905	6	20	8.30	7.74	-3.49	305.5	4.7	343.1	2.95E-02	1.01E-01	1025.7
133125	15	50	7.81	7.17	-3.57	305.7	4.7	338.3	1.09E-02	3.75E-02	1024.6
133330	21	70	8.02	7.34	-4.01	304.5	4.5	348.7	1.03E-02	2.55E-02	1023.7
133610	46	150	7.95	7.04	-4.15	303.9	4.5	357.2	3.79E-03	1.32E-02	1020.8
133830	92	300	7.87	6.49	-3.98	303.3	4.5	321.4	2.14E-03	4.58E-03	1015.4
134145	183	600	7.88	5.58	-3.35	302.4	4.7	291.9	1.24E-03	1.77E-03	1004.6
134945	671	2200	8.83	1.73	-4.20	289.8	4.4	192.0	1.29E-03	1.92E-03	949.0
135520	915	3000	12.21	2.91	-11.02	272.2	2.6	51.4	8.23E-04	1.17E-02	922.9
140230	1525	5000	20.26	5.01	-14.40	248.7	2.0	44.6	2.22E-05	1.47E-04	857.3

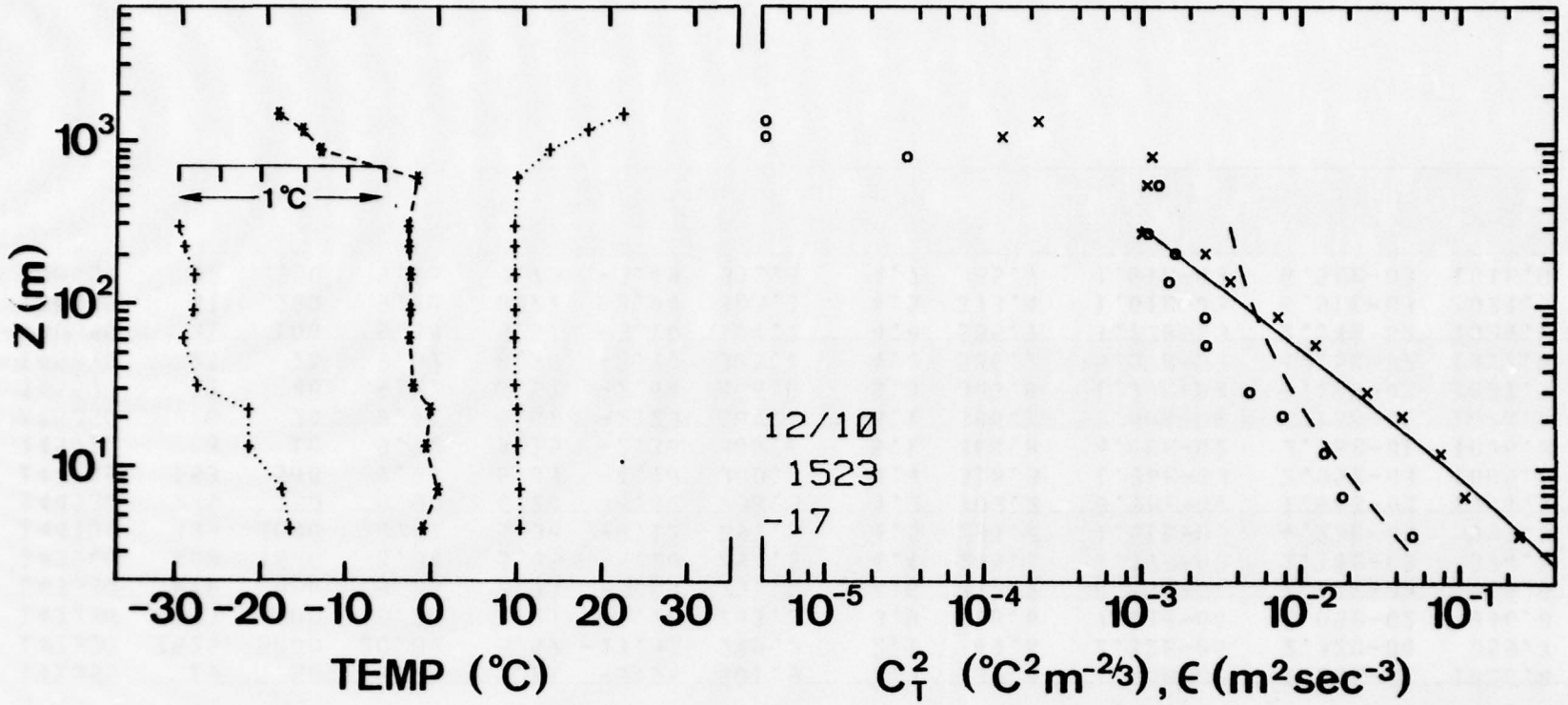


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-14. Ladder Profile #14

Profile# 14 12/10

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
141055	15	50	8.37	7.81	-5.96	301.9	3.9	337.4	1.05E-02	4.25E-02	1026.8
142330	1525	5000	20.88	5.62	-13.93	249.2	2.1	44.8	2.32E-06	2.32E-04	859.7
143230	763	2500	10.20	2.26	-5.78	283.3	3.9	128.8	7.41E-04	1.05E-02	936.8
143530	610	2000	9.23	2.73	-3.83	292.0	4.6	212.2	8.89E-04	1.21E-03	958.6
143900	458	1500	8.84	3.85	-4.20	294.6	4.4	249.1	1.37E-03	1.18E-03	974.8
144200	305	1000	8.87	5.38	-4.12	297.5	4.5	291.6	1.51E-03	4.23E-03	990.9
144530	229	750	8.90	6.20	-4.82	298.5	4.2	302.2	9.98E-04	1.68E-03	1001.7
144735	153	500	8.79	6.83	-4.48	300.3	4.4	318.5	1.36E-03	2.95E-03	1009.0
145020	3	10	9.72	9.15	-2.38	306.6	5.1	368.8	4.88E-02	2.36E-01	1028.8
145250	6	20	9.41	8.81	-2.29	307.1	5.1	386.2	1.90E-02	1.13E-01	1028.6
145530	12	40	9.22	8.57	-2.64	306.6	5.0	382.8	1.03E-02	7.28E-02	1027.9
145830	21	70	9.07	8.36	-3.30	305.4	4.8	386.2	5.37E-03	4.15E-02	1027.0
150050	31	100	9.38	8.57	-3.10	304.7	4.8	385.7	3.22E-03	2.24E-02	1024.0
150430	61	200	9.30	8.22	-3.94	303.1	4.5	378.4	1.61E-03	8.91E-03	1021.9
150650	92	300	9.15	7.75	-3.49	303.3	4.7	355.7	1.61E-03	6.51E-03	1018.0

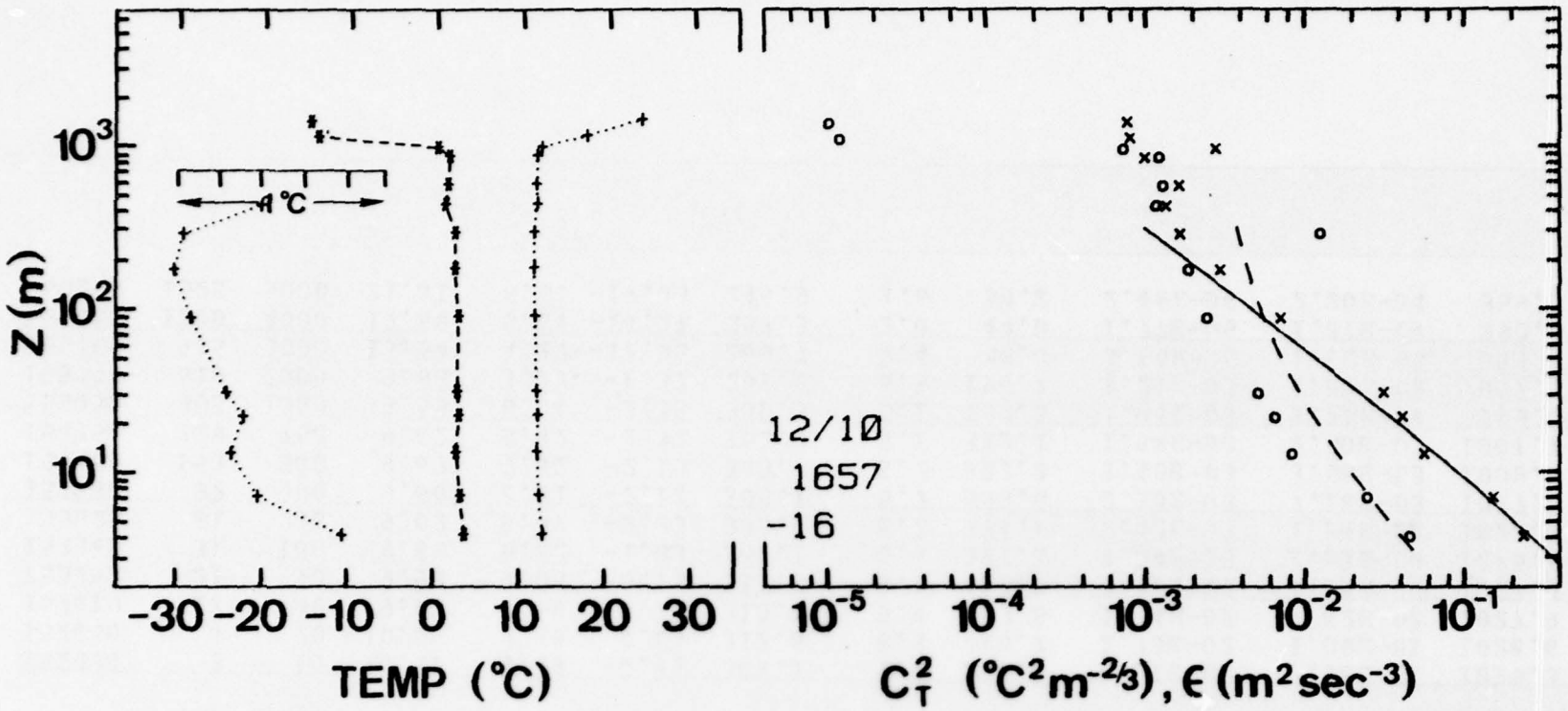


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ε(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ε. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-15. Ladder Profile #15

Profile# 15 12/10

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
152330	3	10	10.12	9.49	-0.86	309.1	5.7	397.0	4.81E-02	2.38E-01	1029.3
152650	6	20	10.09	9.35	0.84	312.6	6.5	410.7	1.73E-02	1.08E-01	1028.6
153010	12	40	9.93	9.19	-0.38	310.1	5.9	423.5	1.34E-02	7.62E-02	1027.9
153250	21	70	9.93	9.08	0.11	311.0	6.1	408.5	7.36E-03	4.39E-02	1027.0
153545	31	100	9.68	8.82	-1.83	307.1	5.3	397.1	4.54E-03	2.63E-02	1025.5
153820	61	200	9.62	8.47	-2.23	305.8	5.2	374.1	2.42E-03	1.24E-02	1022.0
154130	92	300	9.66	8.21	-2.12	305.1	5.2	353.6	2.38E-03	7.18E-03	1017.8
154400	153	500	9.67	7.62	-2.15	303.2	5.2	333.2	1.40E-03	3.58E-03	1008.6
154750	229	750	9.62	6.82	-2.32	302.0	5.1	312.1	1.54E-03	2.50E-03	1001.7
155030	305	1000	9.59	6.04	-2.38	300.3	5.1	292.5	1.04E-03	9.96E-04	993.0
155345	610	2000	9.88	3.27	-1.37	295.5	5.5	196.7	1.21E-03	1.07E-03	957.5
155700	915	3000	13.54	4.27	-12.25	269.7	2.4	46.0	3.14E-05	1.15E-03	923.3
160050	1220	4000	17.88	5.64	-14.27	257.3	2.0	44.0	1.77E-06	1.31E-04	890.0
160500	1525	5000	21.81	6.61	-17.03	245.9	1.6	54.2	2.46E-06	2.20E-04	859.3

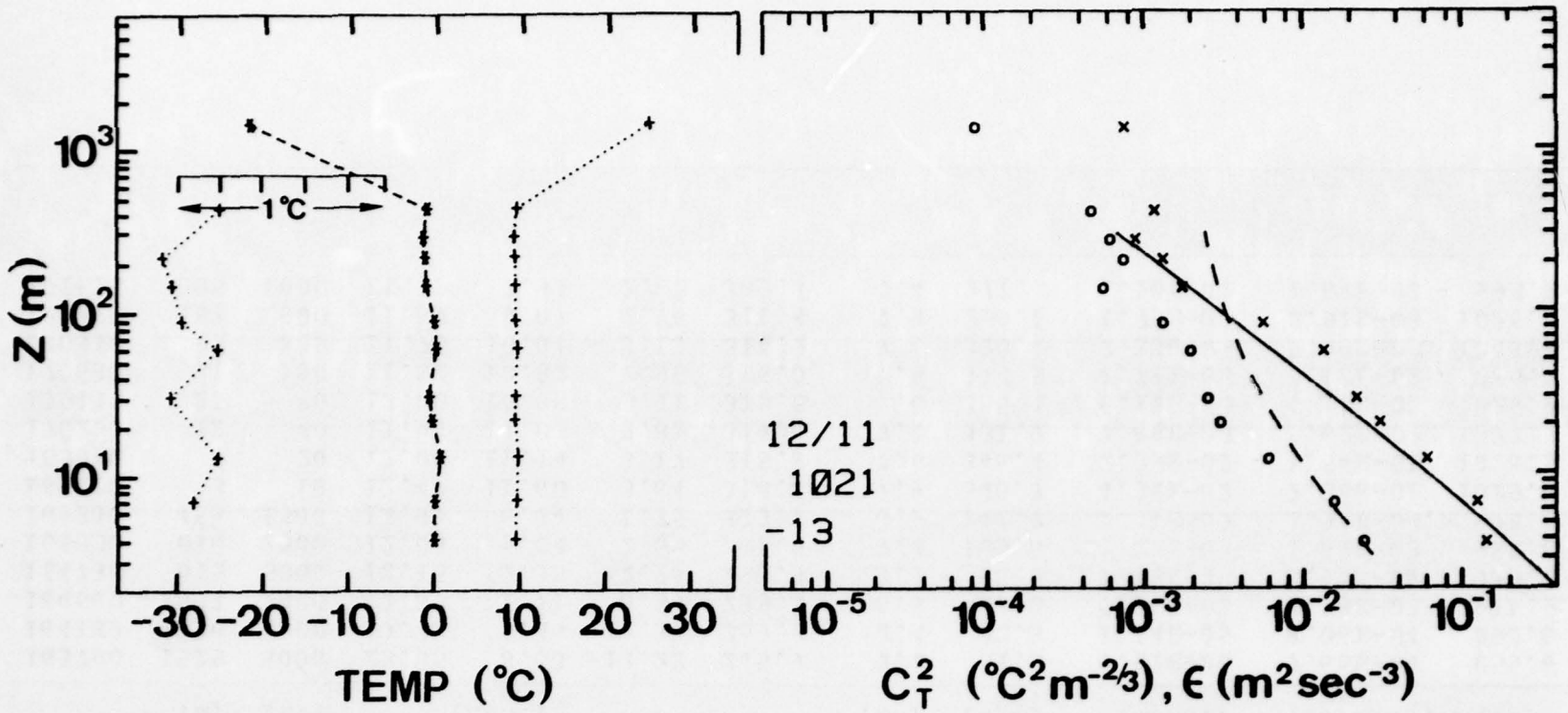


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-16. Ladder Profile #16

Profile# 16 12/10

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m,67)	P (mb)
163700	1525	5000	23.85	8.58	-13.22	245.9	2.2	31.3	9.62E-06	7.65E-04	855.6
164130	1220	4000	17.73	5.45	-12.37	259.3	2.4	42.3	1.14E-05	8.06E-04	890.6
164500	1037	3400	12.67	1.71	0.93	289.3	6.5	82.0	6.91E-04	2.78E-03	911.2
164730	915	3000	12.15	2.33	2.28	295.3	7.2	98.9	1.16E-03	9.90E-04	923.8
165030	610	2000	12.03	5.24	2.05	301.0	7.0	189.6	1.22E-03	1.62E-03	958.6
165300	458	1500	12.09	6.84	1.75	303.1	6.9	241.7	1.11E-03	1.34E-03	975.8
165720	3	10	12.47	11.60	3.64	316.6	7.9	346.7	4.34E-02	2.38E-01	1029.0
165940	6	20	12.06	11.19	3.17	315.8	7.6	348.4	2.33E-02	1.54E-01	1028.5
170200	12	40	11.94	11.03	2.81	314.9	7.4	331.7	7.84E-03	5.62E-02	1027.7
170415	21	70	12.00	10.98	3.11	315.5	7.6	355.1	6.12E-03	4.11E-02	1026.9
170630	31	100	11.92	10.82	2.96	315.0	7.5	344.5	4.79E-03	3.12E-02	1025.7
170910	92	300	11.75	10.04	3.13	314.2	7.6	320.4	2.30E-03	7.03E-03	1017.9
171220	183	600	11.67	9.07	2.76	311.4	7.4	299.1	1.75E-03	2.91E-03	1006.8
171515	305	1000	11.72	7.91	2.82	309.3	7.4	271.3	1.20E-02	1.64E-03	993.2

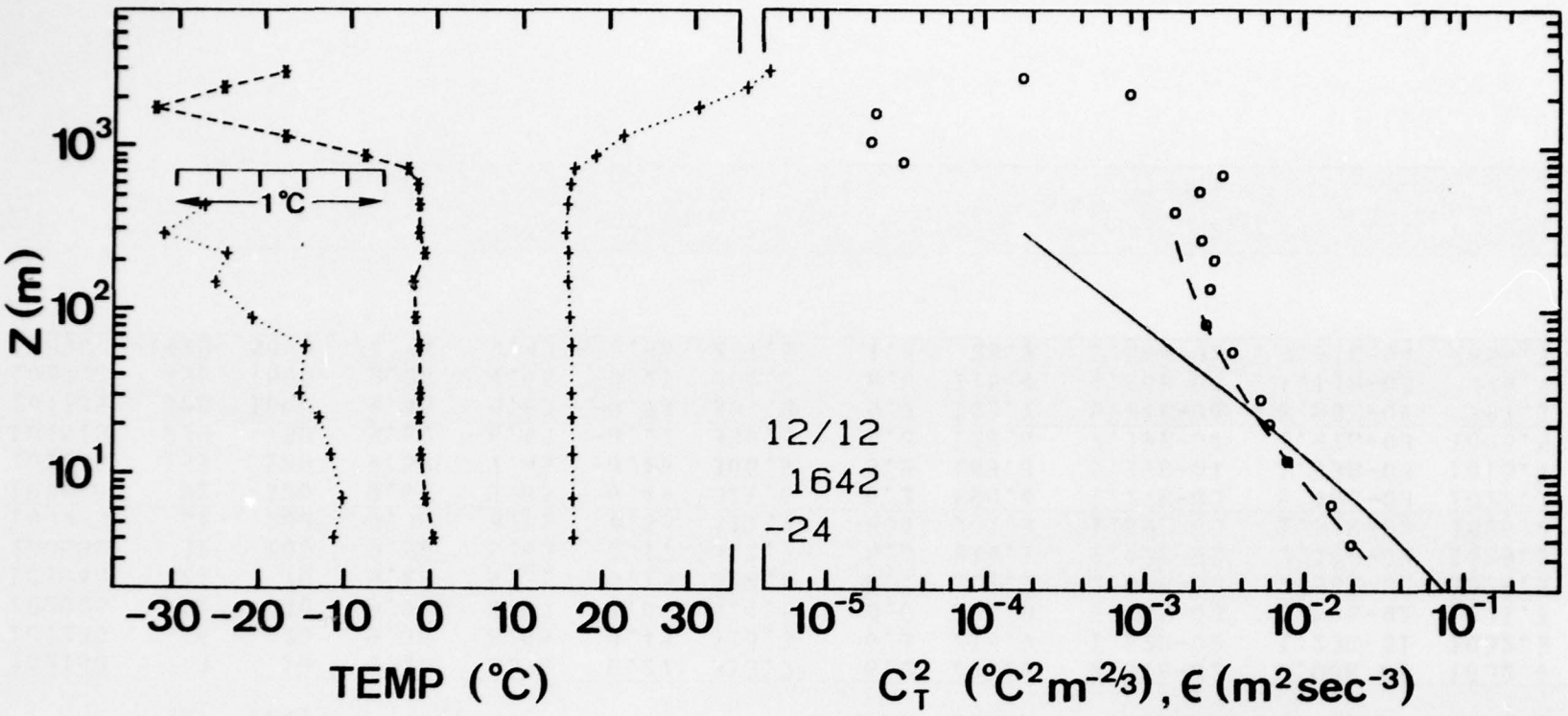


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-17. Ladder Profile #17

Profile# 17 12/11

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
102100	3	10	9.40	8.73	0.27	313.2	6.2	209.6	2.31E-02	0.00E 00	1032.4
102335	6	20	9.66	8.95	0.45	313.3	6.3	216.9	1.52E-02	1.23E-01	1032.2
102825	12	40	9.78	8.97	1.06	314.5	6.6	220.0	5.84E-03	5.87E-02	1031.7
103040	21	70	9.46	8.61	0.18	312.4	6.2	212.2	2.90E-03	2.96E-02	1029.5
103500	31	100	9.56	8.63	-0.17	311.7	6.0	214.1	2.43E-03	2.11E-02	1029.9
103735	61	200	9.79	8.52	0.65	312.7	6.4	201.3	1.89E-03	1.31E-02	1026.8
104010	92	300	9.62	8.05	0.49	311.6	6.3	190.4	1.27E-03	5.46E-03	1022.1
104245	153	500	9.57	7.45	-0.46	308.6	5.9	169.8	5.37E-04	1.69E-03	1015.4
104515	229	750	9.52	6.65	-0.57	306.5	5.8	158.6	7.19E-04	1.27E-03	1005.5
104735	305	1000	9.45	5.83	-0.74	304.8	5.7	143.7	5.94E-04	8.60E-04	997.1
105050	458	1500	9.80	4.65	-0.27	302.0	6.0	115.4	4.56E-04	1.14E-03	978.4
105900	1525	5000	24.64	9.49	-19.96	241.5	1.2	25.2	8.36E-05	7.31E-04	858.7

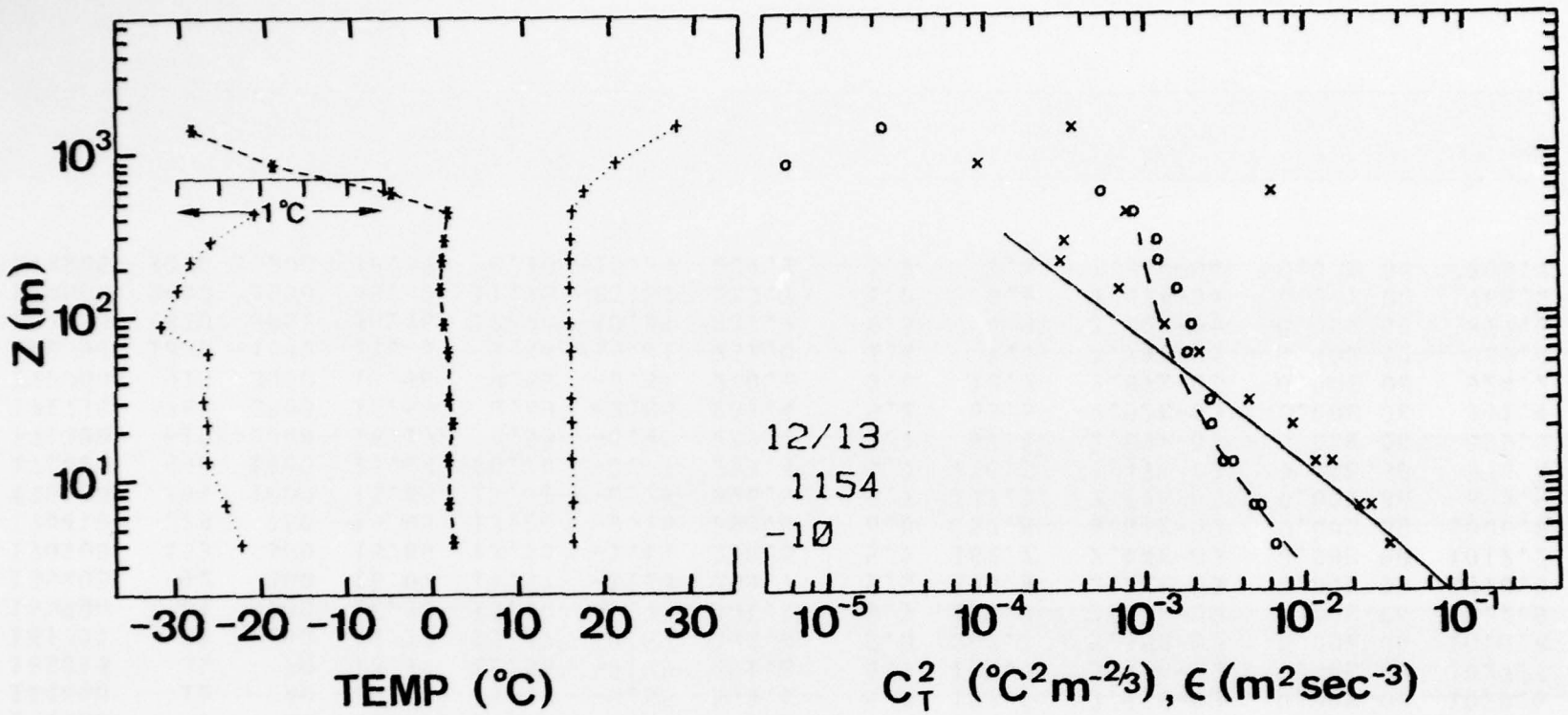


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-18. Ladder Profile #18

Profile# 18 12/12

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
164210	3	10	16.46	15.74	0.76	305.2	6.4	192.8	1.90E-02	0.00E 00	1029.8
164430	6	20	16.50	15.79	-0.03	303.4	6.1	202.1	1.42E-02	0.00E 00	1029.2
164640	12	40	16.45	15.70	-0.55	302.4	5.8	193.6	7.65E-03	0.00E 00	1028.6
165015	21	70	16.39	15.56	-0.79	301.8	5.7	192.7	5.85E-03	0.00E 00	1027.7
165305	31	100	16.30	15.37	-0.67	302.0	5.8	202.1	5.15E-03	0.00E 00	1026.8
165530	61	200	16.32	15.10	-0.75	301.1	5.7	192.7	3.40E-03	0.00E 00	1022.9
165805	92	300	16.07	14.57	-1.23	299.7	5.5	176.9	2.32E-03	0.00E 00	1018.9
170100	153	500	15.89	13.80	-1.41	298.5	5.5	162.7	2.44E-03	0.00E 00	1012.2
170420	229	750	15.95	13.04	-0.15	298.6	6.0	157.4	2.61E-03	0.00E 00	1000.8
170720	305	1000	15.65	12.01	-0.78	296.6	5.7	147.1	2.17E-03	0.00E 00	993.6
171025	458	1500	15.84	10.70	-0.77	293.4	5.7	126.5	1.47E-03	0.00E 00	976.4
171320	610	2000	16.17	9.53	-0.95	289.7	5.7	98.1	2.09E-03	0.00E 00	959.1
171730	763	2500	16.59	8.49	-2.05	283.9	5.2	63.5	2.92E-03	0.00E 00	941.4
172000	915	3000	18.98	9.56	-6.87	270.6	3.6	12.7	2.87E-05	0.00E 00	924.2
172350	1220	4000	22.08	9.86	-15.81	252.0	1.8	7.4	1.79E-05	0.00E 00	889.0
172930	1830	6000	30.46	12.40	-30.28	227.2	0.5	4.8	1.92E-05	0.00E 00	827.9
173600	2440	8000	35.89	11.75	-22.67	213.7	1.0	0.9	7.62E-04	0.00E 00	768.2
174225	3050	10000	38.37	8.10	-15.84	204.1	1.8	1.4	1.61E-04	0.00E 00	709.7

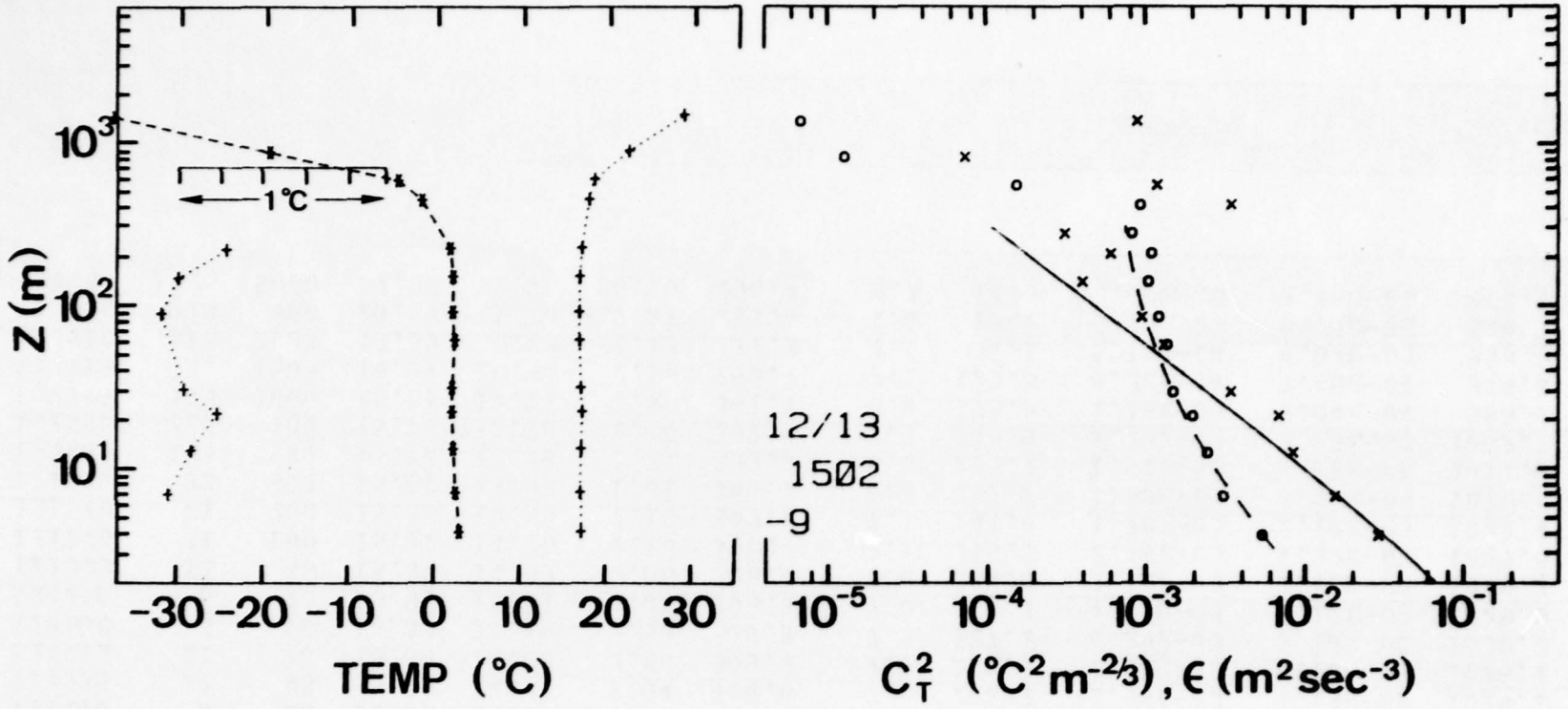


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-19. Ladder Profile #19

Profile# 19 12/13

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
115430	3	10	15.53	14.76	1.73	308.3	6.9	241.6	5.23E-03	2.33E-02	1029.4
115710	6	20	15.83	15.01	2.21	309.3	7.1	232.8	5.09E-03	2.53E-02	1029.9
115935	12	40	15.79	14.91	2.04	308.8	7.0	246.2	2.96E-03	1.13E-02	1029.2
120215	21	70	15.84	14.85	2.50	309.7	7.3	273.1	2.51E-03	8.10E-03	1028.4
120500	3	10	16.00	15.19	2.50	309.8	7.3	327.1	6.29E-03	3.28E-02	1030.2
120810	6	20	15.93	15.11	2.06	308.8	7.0	325.3	4.63E-03	2.12E-02	1029.8
121022	12	40	15.84	14.97	2.00	308.7	7.0	284.6	3.41E-03	1.43E-02	1029.2
121245	31	100	15.82	14.76	2.10	308.7	7.1	245.5	2.46E-03	4.32E-03	1027.5
121540	61	200	15.85	14.48	2.10	307.6	7.1	241.0	1.78E-03	2.12E-03	1022.4
121930	92	300	15.62	13.98	1.61	306.3	6.8	252.2	1.90E-03	1.29E-03	1019.4
122200	153	500	15.70	13.48	1.21	303.9	6.6	265.2	1.54E-03	6.66E-04	1011.6
122500	229	750	15.76	12.78	1.46	302.9	6.7	223.9	1.18E-03	2.86E-04	1002.7
122745	305	1000	15.86	12.11	1.66	301.7	6.8	175.2	1.16E-03	3.04E-04	993.9
123115	458	1500	16.07	10.78	2.16	299.7	7.1	125.5	8.30E-04	7.45E-04	976.6
123510	610	2000	17.39	10.89	-4.17	292.3	4.5	32.1	5.19E-04	6.07E-03	958.0
123920	915	3000	20.97	11.78	-17.27	259.0	1.6	19.2	5.48E-06	8.77E-05	924.7
124430	1525	5000	27.82	12.73	-26.30	236.4	0.7	14.3	2.20E-05	3.43E-04	859.1

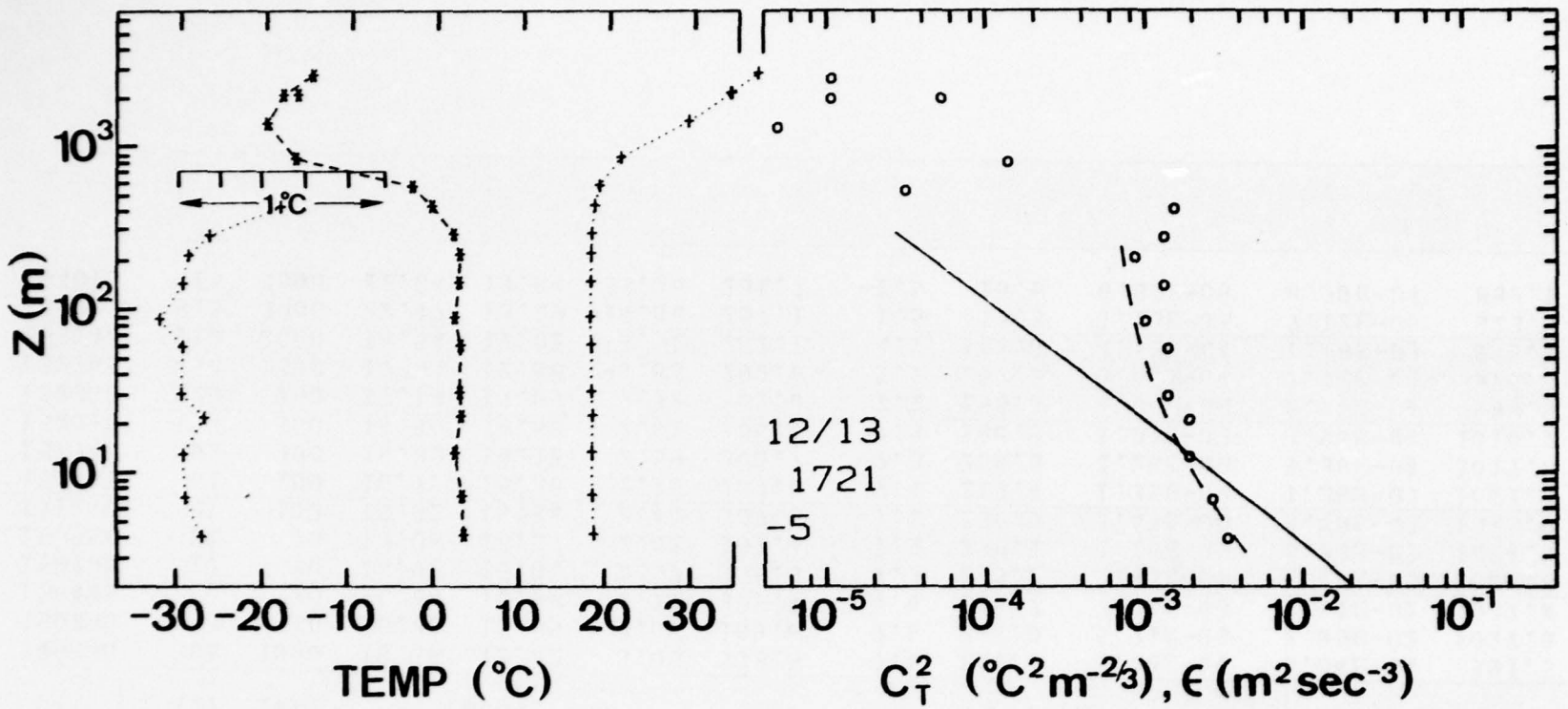


NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-20. Ladder Profile #20

Profile# 20 12/13

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
145930	305	1000	16.66	12.82	3.05	303.5	7.6	142.3	8.08E-04	3.04E-04	991.5
150230	3	10	16.80	15.95	3.06	309.6	7.6	246.0	5.31E-03	2.89E-02	1027.8
150445	6	20	16.84	15.98	2.77	308.7	7.4	245.7	3.01E-03	1.54E-02	1027.4
150700	12	40	16.96	16.05	2.57	308.0	7.3	245.2	2.43E-03	8.43E-03	1026.8
150950	21	70	17.08	16.09	2.42	307.4	7.2	239.1	1.96E-03	6.83E-03	1026.0
151210	31	100	16.92	15.84	2.44	307.5	7.2	236.9	1.47E-03	3.40E-03	1025.0
151445	61	200	16.79	15.38	2.75	307.8	7.4	217.4	1.35E-03	1.28E-03	1021.3
151740	92	300	16.82	15.12	2.59	306.7	7.3	200.6	1.20E-03	9.38E-04	1017.8
152015	153	500	16.90	14.60	2.62	305.4	7.3	188.8	1.03E-03	3.95E-04	1010.2
152300	229	750	17.13	14.09	2.32	302.2	7.2	156.1	1.08E-03	5.96E-04	998.9
152745	458	1500	17.94	12.80	-0.85	290.6	5.7	197.2	9.09E-04	3.42E-03	975.0
153040	610	2000	18.54	12.01	-3.51	282.1	4.7	141.0	1.50E-04	1.16E-03	958.1
153435	915	3000	22.47	13.29	-17.80	257.1	1.5	17.5	1.23E-05	7.12E-05	923.9
154015	915	3000	22.66	13.84	-35.00	231.7	-1.5	18.6	6.50E-06	8.70E-04	882.1



NOTE: The data points plotted are virtual potential temperature (+), dew point temperature (*), C_T^2 (x), and ϵ(o). The solid line is the MOS expression for C_T^2, and the long dash line is the MOS expression for ϵ. The extreme left-hand side of the graph shows an expanded scale plot of virtual potential temperature. The date, time, and Monin-Obukhov stability length, L, are given in the lower center of the graph.

Figure C-21. Ladder Profile #21

Profile# 21 12/13

Time	Alt (m)	Alt (ft)	VT	T (cent)	Td	N	e (mb)	E (V/m)	Eps (m2/s3)	CT2 (C2/m.67)	P (mb)
172100	3	10	18.20	17.32	3.56	308.6	7.8	186.9	3.09E-03	0.00E 00	1025.7
172320	6	20	18.12	17.22	3.46	308.4	7.8	179.3	2.51E-03	0.00E 00	1025.3
172620	12	40	18.12	17.19	2.68	306.5	7.4	153.2	1.79E-03	0.00E 00	1024.9
172840	21	70	18.22	17.16	3.43	308.0	7.8	180.0	1.80E-03	0.00E 00	1024.1
173055	31	100	18.11	16.97	3.28	307.5	7.7	174.0	1.32E-03	0.00E 00	1022.4
173355	61	200	18.12	16.67	3.40	307.3	7.7	167.0	1.32E-03	0.00E 00	1019.3
173615	92	300	18.01	16.30	2.76	305.1	7.4	132.9	9.55E-04	0.00E 00	1015.4
173918	153	500	18.12	15.77	3.27	304.9	7.7	126.8	1.26E-03	0.00E 00	1007.9
174150	229	750	18.15	15.04	3.35	303.7	7.7	123.9	8.24E-04	0.00E 00	999.4
174500	305	1000	18.25	14.43	2.71	300.4	7.4	106.9	1.26E-03	0.00E 00	990.3
174800	458	1500	18.59	13.39	0.26	291.7	6.2	86.0	1.45E-03	0.00E 00	973.4
175110	610	2000	19.14	12.54	-1.89	283.6	5.3	97.2	3.00E-05	0.00E 00	955.4
175520	915	3000	21.55	12.32	-14.93	259.3	1.9	15.4	1.32E-04	0.00E 00	921.9
180145	1525	5000	29.17	13.98	-13.10	238.1	1.5	11.2	4.73E-06	0.00E 00	856.7
180840	2288	7500	33.87	11.10	-14.62	221.3	2.0	6.8	5.06E-05	0.00E 00	777.7
181110	2288	7500	34.02	11.29	-16.24	220.5	1.7	6.7	1.02E-05	0.00E 00	779.4
181710	3050	10000	36.96	6.62	-12.91	207.0	2.2	4.1	1.03E-05	0.00E 00	707.8

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